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# UNIVERSITY OF RAJASTHAN

## MINUTES

*VOLUME ILVIII*

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विश्वविद्यालय कार्यालय मे दिनांक 5 जनवरी, 1971

को मध्याह्न 12-00 बजे हुई संस्कृत अध्ययन

संकाय की बैठक का कार्य विवरण :—

### उपस्थित

श्री प्रफ़ोत्तम लाल भार्गव, डीन (अध्यक्ष)

- |                                |                               |
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| 2. श्री विश्वनाथ मिश्र         | 3. श्री मथुरा प्रसाद उपाध्याय |
| 4. „ रामेश्वर ठाकुर            | 5. „ सुखदेव पाठक              |
| 6. „ शिव लाल द्विवेदी          | 7. „ दिगम्बर भा               |
| 8. „ श्याम नन्दन मिश्र         | 9. डा. ब्रह्मानन्द शर्मा      |
| 10. „ दामोदर शास्त्री भारद्वाज | 11. श्री खड्गनाथ मिश्र        |
| 12. „ श्री सदाशिव पाठक         | 13. „ राधाकृष्ण दीक्षित       |
| 14. „ गणेश दत्त शास्त्री       | 15. „ मुनीश्वर दत्त शास्त्री  |
| 16. „ द्वारिका नाथ शुक्ल       | 17. „ उमेश चन्द्र शर्मा       |
| 18. „ राम सुख पंचोली           | 19. „ मदन लाल डोलिया          |
| 20. „ दयानन्द शास्त्री         | 21. „ रामस्वरूप त्रिवेदी      |
| 22. „ दुर्गादत्त शर्मा         | 23. „ गोविन्द नारायण शर्मा    |
| 24. „ गंगाधर द्विवेदी          | 25. „ छोटे लाल मिश्र          |
| 26. „ गुलाब चन्द जैन           | 27. „ राम शंकर द्विवेदी       |
| 28. „ मांगी लाल योगी           | 29. „ मोती लाल जोशी           |
| 30. „ नन्द कुमार शास्त्री      | 31. „ केशव ठाकुर              |

संकाय की सर्वप्रथम सभा को कार्यवाही प्रारम्भ करने से पूर्व अध्यक्ष ने सभी उपस्थित सदस्यों का हार्दिक स्वागत किया तथा आशा व्यक्त की कि संकाय के कार्य संचालन में उन्हें सभी सदस्यों का पूर्ण सहयोग प्राप्त होगा ।

(1) विश्वविद्यालय के स्टेट्यूट 126(a) के अन्तर्गत संकाय ने निम्नलिखित संस्कृत अध्ययन बोर्ड ऑफ़ स्टेडीज का 3 वर्ष के लिए गठन किया :—

- (1) श्री श्याम नन्दन मिश्र (ज्योतिष) प्रधानाचार्य,
- (2) श्री विठ्ठलनाथ संस्कृत महाविद्यालय, कोटा ।
- (3) श्री दुर्गादत्त जर्मा (व्याकरण) प्रोफेसर एवं अव्यक्ष, व्याकरण विभाग, महाराज संस्कृत कालेज, जयपुर ।
- (4) श्री गंगाधर द्विवेदी (साहित्य) प्रोफेसर एवं अव्यक्ष, साहित्य विभाग, महाराज संस्कृत कालेज, जयपुर ।
- (5) श्री खड्गनाथ मिश्र, (वेदान्त व दर्शन), प्रधानाचार्य, राजकीय महाराजा संस्कृत महाविद्यालय, उदयपुर ।
- (6) श्री गोविन्द नारायण शर्मा, (न्याय) प्रधानाचार्य, राजकीय महाराज संस्कृत कालेज, जयपुर ।
- (7) श्री विश्वनाथ मिश्र, (साहित्य) प्रधानाचार्य, श्री गार्दूल संस्कृत विद्यापीठ, बीकानेर ।
- (8) श्री रामनारायण चतुर्वेदी (विद) प्रधानाचार्य, राजकीय दरवार संस्कृत कालेज, जोधपुर ।
- (9) श्री मोती लाल जोशी, प्रधानाचार्य, राजकीय धूलेश्वर संस्कृत महाविद्यालय, मनोहरपुर (जयपुर) ।
- (10) श्री लक्ष्मीलाल जोशी (External)  
प्रो. माडल जिला भीलवाड़ा, (राजस्थान) ।
- (11) श्री सुर्जन दास स्वामी (External)  
रीडर संस्कृत विभाग, जोधपुर विश्वविद्यालय, जोधपुर ।
- (12) कला संकाय की संस्कृत बोर्ड आफ स्टेडीज के संयोजक (पदेन सदस्य) ।

(2) विश्वविद्यालय के स्टेट्यूट 124 (IX) के अन्तर्गत संकाय ने निम्नलिखित दो सदस्यों का सहचरण किया : —

- (1) श्री लक्ष्मी लाल जोशी, पो. माडल जिला भीलवाड़ा (राजस्थान) ।
- (2) श्री विद्याधर शास्त्री, बीकानेर ।
- (3) संकाय को बताया गया कि ऐकेडेमिक कौंसिल द्वारा नियुक्त समिति की संस्तुति पर, ऐकेडेमिक कौंसिल व सिडीकेट ने संस्कृत अव्ययन

संकाय के गठन से सम्बन्धित स्टेट्यूट 124 में निम्नलिखित संशोधन सीनेट को प्रस्तुत किये हैं :—

*Statute—124*

- (a) Clause (ii) be reworded so as to read as follows:—  
“Principals of all the colleges affiliated upto Acharya Standard”.
- (b) Clause (iv) be re-worded so as to read as follows:—  
“One teacher possessing 8 years experience of teaching Shastri Classes from each college affiliated in the Faculty upto Shastri standard only, elected by the teachers of the colleges concerned from amongst themselves.
- (c) Clause (ix) be re-worded so as to read as follows:—  
“Two educationists not being teachers in the University or any of its affiliated colleges to be coopted by the Faculty.
- (d) The following new clauses be added:—  
“(x) Two teachers possessing at least three years’ experience of teaching in a Teachers’ Training Institute to be nominated by the Director of Sanskrit Education”.
- “(xi) Two members of the Faculty of Education to be coopted by the Faculty.”

इस संबंध में संकाय ने श्री मोती लाल जोशी, प्रधानाचार्य, राजकीय धूलेश्वर महाविद्यालय, मनोहरपुर, के पत्र दिनांक 30-12-1970 के द्वारा प्रेषित निम्नलिखित प्रस्तावों पर विचार किया (श्री जोशी ने अपने पत्र दिनांक 23-12-1970 के द्वारा स्टेट्यूट 124 (III) व (IV) में कुछ संशोधन करने के प्रस्ताव किये थे परन्तु उनका समावेश उन्हीं के पत्र दिनांक 30-12-1970 के द्वारा लिए गए प्रस्तावों में होने के कारण उन पर अलग से विचार करने की आवश्यकता नहीं रही) :—

- (i) The proposed amendment in S.124 (ii) seems to be contrary to the law of justice as it shall mean to debar all the principals of Shastri and Shikshashastri

colleges. Therefore, it is suggested that the wordings should remain as :

Principals of all the colleges affiliated in the Faculty.

- (ii) There is a post of Head of the Department (Professor) in Shikhashastri colleges according to the minimum requirements of the University for affiliation of such colleges. In order to give him due representation as given to the Heads of Acharya standard, S.124(iii) be reworded so as to read as follows:—

All Heads of Departments of Acharya/Shikhashastri standard in the colleges affiliated in the Faculty possessing at least 8 years' experience of teaching Acharya or Shastri or Shikhashastri B.Ed. classes.

- (iii) S.124(iv) be reworded so as to read as follows in order to exclude the teachers of classes below the Shastri standard and to give due representation to the teachers of Shikhashastri classes :—

One lecturer possessing 8 years experience of teaching shastri or Shikhashastri B.Ed. classes from each college affiliated in the Faculty up to Shastri or Shikhashastri standard only, elected by the lectures of the colleges concerned from amongst themselves.

- (iv) S. 124 (x) be reworded so as to read as follows :—

One or two teachers possessing at least three years' experience of teaching in a Teachers Training Institute to be nominated by the Director of Sanskrit Education, provided there is no representation from Shikhashastri colleges in accordance with clauses (iii) and (iv) as the case may be.

संस्तुति करने का निश्चय किया कि -

- (क) स्टेट्यूट 124 के क्लॉज (II) को यथावत् रखा जाय, अर्थात् उसकी शब्दावली निम्न प्रकार ही रहे :—

(ख) स्टेट्यूट 124 के क्लाज (III) की शब्दावली को संशोधित कर निम्न प्रकार पढ़ा जाय :—

*S. 124 (iii) :*

All Heads of Departments of Acharya/Shikshashastri standard in the colleges affiliated in the Faculty possessing of least 8 years' experience of teaching Acharya or Shastri or Shikshashastri/B. Ed. classes.

(ग) सीनेट को प्रस्तुत स्टेट्यूट 124 के क्लाजेज (IV) व (X) की प्रस्तावित शब्दावली को परिशोधित कर निम्न प्रकार पढ़ा जावे :—

*S. 124(iv) :*

'One teacher possessing 8 years experience of teaching Shastri or Shikshashastri/B.Ed. classes from each college affiliated in the Faculty upto Shastri or Shikshashastri standard only, elected by the teachers teaching Shastri Shikshashastri classes in the college concerned from amongst themselves.'

*S. 124(x) :*

'Two or one teachers possessing at least 3 years' experience of teaching in a Teachers' Training Institute to be nominated by the Director of Sanskrit Education, provided there is no or only one representative from Shikshashastri colleges in accordance with clauses (iii) and (iv), as the case may be.'

(4) संकाय ने श्री मोती लाल जोशी, प्रधानाचार्य, राजकीय धूलेश्वर संस्कृत महाविद्यालय, मनोहरपुर के पत्र दिनांक 30-12-1970 के द्वारा प्रेषित निम्नलिखित अन्य प्रस्तावों पर भी विचार किया :—

(i) Statute 125 be reworded so as to read as follows:—  
"There shall be a Dean of the Faculty of Sanskrit Studies who shall be appointed by the Vice-Chancellor from amongst the following :

(1) University Professor of Sanskrit or Principal of a college affiliated in the Faculty for Acharya Standard.



- (2) Head of a Department in a college in the Faculty affiliated for Acharya standard or Principal of a college in the Faculty affiliated for Shastri standard or Principal of a colleges in the Faculty affiliated for Shikshashastri standard.
- (ii) Since the Acharya, Shikshashastri and Shastri examinations are equivalent to the M. A. B.Ed. and B. A., therefore, Acharya colleges are equivalent to the post-graduate colleges and Shastri or Shiksha Shastri colleges are that of the Degree level. Hence the pay scale of the teachers of Sanskrit colleges should be at par with that of the post graduate and Degree colleges. Therefore, the existing pay scales given under the heading of the Faculty of Sanskrit Studies in 0-66 be replaced by the followings:—
- (1) Principals of Colleges having Shastri and Acharya classes of Acharya classes alone.  
Rs. 1100-1500
  - (2) Principals of colleges having Shikshashastri classes.  
Rs. 700-1200
  - (3) Principals of collages having Shastri colleges.  
Rs. 700-1200
  - (4) Professors and Heads of Deptts. in colleges of Category 1 or 2  
Rs. 700-1200
  - (5) Lecturers in the above colleges.  
Rs. 375-850
- (iii) 0-329M should be read as follows :—

“Women, teachers, Librarians, Inspectors can only appear as private candidates in accordance with the rules laid down for B.A. and M.A. examinations.

इस संबंध में संकाय को बताया गया कि--

- (अ) ऐकेडेमिक कौंसिल द्वारा नियुक्त समिती की संस्तुति पर, ऐकेडेमिक कौंसिल तथा मिण्डीकेट ने स्टेट्यूट 125 में जो

संशोधन सीनेट को प्रस्तुत किये हैं उनके स्वीकृत होने पर स्टेट्यूट 125 निम्न प्रकार से पढ़ा जावेगा :—

“There shall be a Dean of the Faculty of Sanskrit studies who shall be appointed by the Vice-Chancellor from amongst the following:—

- (i) University Prof. of Sanskrit.
- (ii) Principal of a college affiliated in the Faculty for Acharya standard.

(ब) सिन्डीकेट ने अपने निश्चय सं० 22 दिनांक 14-12-70 के द्वारा आर्डिनेन्स 66 में संशोधन कर संस्कृत अध्ययन संकाय के अध्यापकों के लिए निम्नलिखित न्यूनतम वेतनमान निर्धारित किये हैं :—

*For Teachers of colleges affiliated for Sanskrit examinations in the Faculty of Sanskrit studies.*

- (1) Principals of colleges of Acharya standard.  
Rs. 800-50-1300
- (2) Principals of colleges of Shastri standard.  
Rs. 375-25-550-30-850.
- (3) Professors/Heads of Departments of Acharya standard.  
Rs. 375-25-550-30-850.
- (4) Lecturers (Shastri and/or Acharya standard).  
Rs. 250-20-450-25-625.

*For teachers of colleges affiliated for Shiksha Shastri Examination in the Faculty of Sanskrit studies.*

- (1) Principal  
Rs. 600-30-750-40-950-50-1100
- (2) Lecturers  
Rs. 250-20-450-25-625.

(स) शिक्षकों, महिलाओं, पुस्तकालय अध्यक्षों, निरीक्षकों आदि को उप-कुलपति महोदय की विशेष अनुमति से 1971 की शास्त्री

तथा आचार्य परीक्षाओं में प्राइवेट प्रत्यागियों के रूप में बैठने की सुविधा दे दी गई है ।

संस्तुति करने का निश्चय किया कि—

(क) स्टेट्यूट 125 में एकेडेमिक कौंसिल तथा सिन्डीकेट द्वारा मीनेट को प्रस्तुत किए गए संशोधनों के अतिरिक्त और कोई परिवर्तन आवश्यक नहीं है ।

(ख) आर्डिनेन्स 66 में आवश्यक संशोधन कर संस्कृत अध्ययन संकाय के अध्यापकों के न्यूनतम वेतन मान निम्न प्रकार से निर्धारित किए जायें :—

- (1) Principals of Colleges having Shastri and Acharya classes or Acharya classes alone  
Rs. 1100-1500
- (2) Principals of colleges having Shikshashastri classes.  
Rs. 800-1300
- (3) Principals of colleges having Shastri classes.  
Rs. 700-1200
- (4) Professors and Heads of Departments in colleges of category (1)  
Rs. 700-1200
- (5) Professors and Heads of Departments in colleges of category (2)  
Rs. 600-1100
- (6) Lecturers in the above colleges Rs. 375-850

(ग) आर्डिनेन्स 329 एम-9, जिसे निरस्त किया जा चुका है, को फिर से निम्न प्रकार लिखा जाय :—

Teachers, Inspecting Officers, Librarians or Library clerks, Women candidates, Deaf, Physically handicapped candidates and Members of the Defence forces of India shall be eligible to appear at the Shastri and Acharya examinations as non-collegiate candidates in accordance with the provisions for B.A. and M.A. examinations contained in Ordinances 173 to 192.

(5) संकाय ने श्री मोती लाल जोशी, प्रधानाचार्य, धूलेश्वर संस्कृत महाविद्यालय, मनोहरपुर के पत्रांक 1935 दिनांक 22-12-70 के द्वारा प्रेषित निम्नलिखित प्रस्ताव पर विचार किया :—

“जुलाई 971 के प्रारम्भ से शास्त्री परीक्षा का पाठ्यक्रम त्रिवर्षीय किया जाना चाहिए जैसे कि त्रिवर्षीय स्नातक पाठ्यक्रम है। इससे संस्कृत महाविद्यालय स्तर का शिक्षाक्रम सामान्य महाविद्यालयों के समानान्तर स्थापित होगा।”

निश्चय किया कि संकाय उपरोक्त प्रस्ताव से सहमत है अतः इसे संस्कृत अव्ययन बोर्ड आफ स्टेडीज को इस पर विचार कर त्रिवर्षीय पाठ्यक्रम बनाने तथा सम्बन्धित आर्डिनेन्स एवं रेगुलेशन्स में आवश्यक परिवर्तन प्रस्तुत करने हेतु भेज दिया जावे।

(6) संकाय ने संस्कृत में एम० ए० पास विद्यार्थी को शास्त्री या आचार्य परीक्षा में बैठने की अनुमति देने के प्रश्न पर विचार किया।

संस्तुति करने का निश्चय किया कि संस्कृत में एम० ए० पास विद्यार्थी को आचार्य परीक्षा के उसी विषय में बैठने योग्य माना जाये जिस विषय में उसने संस्कृत की एम० ए० परीक्षा पास कर विशेषज्ञता प्राप्त की है। तदनुसार आर्डिनेन्स 392 एम. 13 के पैरा 2 को संशोधित कर निम्न प्रकार पढ़ा जाय :—

“A candidate who has passed the Shastri Part II examination or M.A. examination in Shanskrit of the University or the Shastri examination conducted by the Registrar, Departmental Examinations, Rajasthan or an examination recognised as equivalent thereto and prosecuted a regular course of study for the Acharya Part I Examination for one academic year in a recognised Institution shall be admitted to Acharya Part I Examination, provided that a candidate who has passed M.A. Examination in Shanskrit shall be deemed eligible to appear at the Acharya Part I Examination in the subject in which he specialised in his M.A. Examination.”

(7) संकाय ने बैठक में प्रस्तुत किये गये प्रस्ताव पर विचार किया कि सामान्य संस्कृत विषय के पढ़ाने के लिए एम. ए. संस्कृत को भी स्वीकृति दी जानी चाहिये ।

निश्चय किया कि उपरोक्त प्रस्ताव स्वीकार न किया जावे ।

ह० पुरुषोत्तमलाल भार्गव  
डीन.

MINUTES OF THE MEETING OF THE FACULTY  
OF LAW HELD ON 25TH JANUARY, 1971  
AT 12.00 NOON IN THE UNIVERSITY  
OFFICE, JAIPUR.

Present :

1. Dr. G. S. Sharma,  
(In the Chair)
2. Shri K. B. Agrawal
3. Shri Net Ram
4. Dr. R. N. Varma
5. Dr. S. C. Thanvi
6. Dr. S. N. Dhyani
7. Shri S. R. Baj.

Shri J. N. Mathur,

Dy. Registrar.

(1) The minutes of the meeting of the Faculty of Law held on 27th October, 1969 were *confirmed*.

(2) The Faculty considered the recommendations of the Board of Studies in Law made at its meeting held on 25-9-1970 (*Vide Appendix-I*).

*Resolved to recommend* that the recommendations of the Board be approved with the following modifications/observations.

(I) Ref. Resolution No. 4 of the Board :

Since the details of the courses of Legal remedies paper prescribed for the LL. B. Third Year Examination were not received so far, the Faculty *authorised* the Dean to place the same direct before the Academic Council at its next meeting.

(II) Ref. Resolution No. 9 of the Board :

Since the scheme and syllabus etc. of the propo-

sed new Branch VII—Labour Law for LL. M. examination has not been received from the Convener so far, the Faculty authorised the Dean to place the same direct before the Academic Council at its next meeting.

**(III) Ref. Resolution No. 10 of the Board.**

Since the details of the proposed tour to factories and to institutions of criminal justice and administration for the students of the Diploma Courses in (a) Labour Law, Labour Welfare and Personnel Management and (b) Criminology and Criminal Administration had not so far been worked out by Dr. R. N. Varma and Dr. S. N. Dhyani, the Faculty *authorised* the Dean to place the same direct before the Academic Council at its next meeting.

**(IV) Ref. Resolution No. 15 of the Board :**

The recommendation of the Board be accepted and consequently the following new O-256H-1 be introduced in the Univ. Hand Book Pt. II :

“O-256H-1 A candidate who has already passed the Diploma in Labour Law, Labour Welfare and Personnel Management examination of the University may be permitted to appear at a subsequent examination without attending classes, in such paper (s) which he had not taken to the earlier examination and which are prescribed in the scheme of examination in force and, if successful, he will be given a Certificate to that effect. Such a candidate shall be required to obtain at least 48% marks in each paper for a pass.

A candidate who desires to enter for an examination under this Ordinance must submit his application on a prescribed form so as to reach the Registrar not later than the 1st Octo-

ber, or by the 15th of October if accompanied by a late fee of Rs. 10/—, or by 10th November in case he is a collegiate candidate, preceding the date of examination. The application shall be accompanied by an examination fee of Rs. 20/— and a marks fee of Rs. 2/—, and shall be forwarded by the Principal of the college concerned.

In the case of a candidate whose application is rejected or who does not submit an application but only sends in the fees, the amount paid by the candidate on account of fees shall be refunded after deducting Rs. 2/—."

- (3) The Faculty considered the question of recommending minimum qualifications in respect of the Head of Post-graduate Departments and Lecturers for LL.M. classes in a college affiliated for LL.M. standard and also the requirements of teaching staff, Library grants etc.

In this connection the Faculty reviewed the minimum qualifications prescribed for the teachers and the minimum requirements as already laid down for the LL.B. classes.

*Resolved to recommend that :*

- (I) The minimum qualifications for teachers of LL.M. classes be LL.M. degree provided that in the case of the Head of the Department he should, in addition, possess at least five years experience of teaching LL.M. classes.

Consequently O.65-IV-Faculty of Law in respect of the minimum qualifications for teachers be reworded so as to read as follows :

**"For Teachers of Law :**

- (a) *Professor or Head of the Department for LL.B. classes who must be whole time :*  
LL.M. with at least five years experi-



ence of teaching of classes for the degree of Bachelor of Laws.

(b) *Professor or Head of the Department for LL.M. Classes who must be whole-time : LL.M. with at least five years experience of teaching LL.M. classes.*

(c) *Whole-time Lecturers for LL.B./LL.M. classes.  
LL.M.*

(d) *Part-time Lecturers for LL.B. classes :*

LL. B. with at least seven years practice at the Bar.

(II) The minimum requirements for Law classes be laid down as follows :

(a) Every college providing instruction for the LL.B. course shall have a whole-time teaching staff consisting of one Head of the Department and two more teachers not below the rank of Lecturers. When LL.M. Pt. I class is added it should be ensured that besides the Head of the Department there must be at least three whole-time Lecturers when LL.M. Pt. II class is added to more whole-time Lecturers must be appointed.

(b) In addition to the aforesaid minimum whole-time staff the college shall have part-time Lecturers if it does not have the whole-time staff to the required extent, the number of part-time Lecturers to be determined according to the total work load including tutorials; provided that no part-time lecturer shall work for more than 9 periods per week and provided further that a teacher who does not possess the LL.M. degree shall not be permitted to take LL.M. classes.

- (c) The teaching staff shall possess the minimum qualifications as laid down under O.65 the Univ. Hand Book Pt. II.
- (d) Provision for tutorials for one period per student per week shall be made.
- (e) Adequate provision for Library and library services shall be made. The Library shall be equipped with a complete and up-to-date set of the All India Reporter. The following minimum grants shall be provided and spent :

( i ) *Non-recurring grant :*

Rs. 10,000/- for LL.B. and additional Rs. 90,000/-for LL.M. The non-recurring grant for LL.B. will be spread over three years and for LL.M. over two years.

(ii) *Recurring grant :*

Rs. 1,500/-p.a. for LL.B. and additional Rs. 3,500/-p.a. for LL.M.

- (f) Adequate building, furniture, equipment, necessary ministerial and class IV staff shall be provided.

(4) It was reported to the Faculty that :

- ( i ) The Dean of the Faculty of Law informed the University vide his letter dated 1-7-1970 that (a) according to O.252 a candidate who secured either a minimum of 45% marks in the aggregate of all the optional subjects or 48% marks in any one of the optional subjects offered by him at the degree examination was eligible for admission to the LL.B. first year class, (b) the words-“optional subjects” presented certain difficulties in determining the eligibility of a student as various schemes had been introduced by the University for the degree examinations from time to time in some of which marks awarded for the compulsory subjects had been taken into account in awarding division but not in

others and (c) in certain cases in this University as well as in others there was no clear categorisation of compulsory and optional subjects which made it difficult to determine as to which subjects should be treated as optional in complying with the requirements of the aforesaid ordinance.

- (ii) The Dean, therefore, suggested that for the purpose of admission to LL.B. First Year, the marks of all those subjects be taken into consideration which had been considered for awarding division at the degree examination either in this University or else-where.
- (iii) The aforesaid suggestion was accepted by the Vice-Chancellor vide his order dated 18-7-1970 and all college affiliated in the Faculty of law were informed accordingly.

Resolved to recommend that (i) the aforesaid orders of the Vice-Chancellor be confirmed and (ii) for future, O.252 of the University Hand Book Pt. II be amended so as to read as follows :

“O.252—candidate who has taken the Bachelor's Degree in Arts Science/Commerce/Medicine/Engineering/Agriculture of the University or any other University recognised for the purpose by the Syndicate with full course prescribed for the degree and secured either a minimum of 45% marks in the aggregate marks prescribed for the examination or 48% marks in any one of the subjects offered by him at the Bachelor's Degree Examination shall be eligible for admission to the LL.B. First Year Course.

N.B. (i) For the purpose of this Ordinance the marks of only those subjects shall be taken into account which had been considered for awarding division at the Bachelor's Degree Examination.

(iii) Candidates who have passed their Bachelor's Degree Examination with full course at one time or in parts or as private candidates or by correspondence will also be eligible for admission to the LL.B. First Year Course provided they secured the minimum marks as prescribed above.

(iii) A concession of 5 marks in the total aggregate or in any one subject may be allowed by the Head of an Institution to a candidate under one or more of the following categories :

(a) Woman candidate,

(b) Candidate who has attained high Proficiency in games/co-curricular activities, and

(c) Candidate belonging to scheduled caste or scheduled tribe.

(iv) A candidate who already holds a Master's Degree may be exempted from the operation of the rule of securing minimum marks at the qualifying examination.

(5) With reference to resolution No. 5 dated the 15th January, 1970 of the Faculty of Engineering and Technology, the Faculty considered a letter No. 195/Admn. LL.B. dated 24-9-1969 from the Honorary Secretary, Institution of Engineers (India), Rajasthan Centre, Jaipur and another letter No. BCT/158/dated the 13th November, 1969 from the Secretary, Institution of Engineers (India), Calcutta, requesting the University to recognise Sections A and B of the A.M.I.E. Examination of the Institution as equivalent to the B.E. Examination of the University for purpose of admission to the LL.B. course, on the ground that the same were recognised by the Central Government, various State Government and many private and public organisations as equivalent to B.E. Degree.

of an Indian University for purpose of recruitment in Engineering services and by the Roorkee University and the Indian Statistical Institute, Calcutta, for admission to their post-graduate courses.

Resolved that Sections A and B of the A.M.I.E. Examination of the Institution of Engineers (India) be not recognised for purposes of admission to the LL.B. Course.

(5) It was *reported* to the Faculty that :

- (i) Under O.193-of the University Hand Book Pt. II a candidate for a pass at the Supplementary examination was required to secure 36% marks in the paper in which he appeared and 84% in the total aggregate of all the papers. For award of divisions minimum pass marks i.e. 36 marks were taken into account.
- (ii) The Vice-Chancellor vide his orders dated 23-9-1970 accepted the recommendation of the Dean, Faculty of Law to the effect that in all such cases where a candidate on taking into account the minimum pass marks for the purpose of award of division, fell short in the minimum aggregate, the candidate be deemed to have secured the required minimum aggregate of marks.

Resolved to recommend that (i) the aforesaid orders of the Vice-Chancellor be confirmed and (ii) for future the relevant O.193-A of the Univ. Hand Book Pt. II be reworded so as to read as follows :

“O.193-A: A candidate who fails to secure at the immediately preceding First Year or Second Year of LL.B. (A) or First Year, Second Year or Third Year of LL.B. (P) Examination of the University minimum percentage of marks in one paper only or in the aggregate or both (i.e. in the aggregate and in one paper); and has obtained not less than 48% marks in the aggregate of the five papers in which he has passed or in the case of candidate failing in aggregate only 48% marks in the aggregate of

five Papers excluding the paper in which he has secured the lowest marks shall be eligible to appear the Supplementary Examination in one paper only in which he has failed or in the case a candidate failing in aggregate only in the paper in which he has obtained the lowest marks to be held in the month of August. A candidate shall be declared to have passed the supplementary examination if he obtains at least 36% marks in which he has appeared and 48% in the prescribed papers. For the purpose of determining division a candidate shall be deemed to have secured minimum pass marks only prescribed for that paper irrespective of the marks actually obtained by him; provided that on taking into account the minimum pass marks if the candidate falls short in the minimum aggregate prescribed for the award of Second Division, he shall be deemed to have secured the same."

(7) The Faculty considered whether candidates who prosecuted a regular course of study for the LL.B. (Final) Examination and failed to pass the said examination till 1966 be allowed to appear under the new scheme in 1971 and 1972 (1972 being the last examination under the two-year course) and be examined in the following papers, as opined by the Dean, Faculty of Law to whom a reference was made :

1. Civil procedure Code and pleadings
2. The Law relating to transfer of property and specific relief
3. Company Law
4. Land Law/Income Tax Law/Labour Law
5. Hindu Law
6. Mohammadan Law
7. Public International Law.

*Resolved to recommend that the aforesaid recommendation of the Dean be accepted.*

8) The Faculty considered letter dated the 20th January, 1971 from Shri S. R. Baj, Lecturer in Law, University School of Law, Jaipur drawing attention to the following resolution

passed by the All India Law Teachers Conference recently held at Jaipur :

- (a) This Conference draws the attention of the University Grants Commission and the various Universities in India to the resolution adopted by the Conference at its 7th Annual Session held at Ernakulam on 30th and 31st December, 1965, requesting the Universities to treat the LL. B. studies as a post-graduate course and the degree of Bachelor of Laws as Post-graduate Degree.
- (b) The Conference notes with regret that no action whatsoever has been taken by the Universities and the University Grants Commission in implementing the aforesaid resolution.
- (c) Having given the matter its very careful consideration this Tenth Session of All India Law Teachers Association again reiterates its considered view that LL. B. teaching should be recognised and given the status of a post-graduate course culminating in a post graduate and should be treated as a separate subject by the University Grants Commission and the Universities for post degree developmental purposes.

*Resolved to recommend* that LL. B. teaching which has already been recognised as a Post-degree course should be deemed to culminate in a Post-graduate degree.

*Resolved to recommend* that (i) a candidate for admission to the LL. M. Part I course be required to have secured a minimum of 55% marks at the Bachelor of Laws Degree Examination and (ii) the existing provision in O 257-A of the University Hand Book Pt. II for allowing whole-time teachers of Law to appear at the LL. M. examination without having undergone the prescribed course of study as a regular student be *deleted*.

*Resolved further to recommend* that consequent to the above, O 257-A of the University Hand Book Pt. II be rewritten so as to read as follows :

O 257-A : Candidate who has passed the Bachelor of Laws (Professional) Degree Examination of the Univer-

sity or an examination of some other University recognised by the Syndicate as equivalent the- refo securing a minimum af 55% marks in the aggregate shall be eligible to appear at the Master of Laws Degree Examination of this University after having undergone the prescribed course of study in an affiliated college. ”

10. The Dean placed before the Faculty requests from the students of Diploma Courses in Labour Law and in Criminology for allowing them the option of answering their question papers through Hindi medium (instead of English medium only as required at present).

*Resolved to recommend* that the aforesaid request be acceded to provided the recognition of the aforesaid two Diplomas is not affected by the Central Government or the State Government, as the case may be.

11. *Resolved to recommend* that (i) 16th April be fixed as the last date for submission of the Dissertation by the LL.M. students and the students of the various Diploma Courses in Law and (ii) consequently the following additions and/or alterations be made.

(I) *Pages 28, 42 and 46 of the 1970 edition of the Syllabus for the Faculty of Law :*

Add the following Note to the paragraph occurring under Paper VI-Dissertations :

“N. B.—/Candidates are required to submit their Dissertation not later than 15th April of the year in which they are appearing at the examination”.

(II) *Page 37 of the same edition of the syllabus :*

The existing note occurring under paper V-Dissertation be rewritten so as to read as follows :

“Candidates are required to submit their Dissertation not later than 16th April of the year in which they are appearing at the examination”.



[III) *Page 50 of the same edition of the syllabus :*

*Insert* the words—"so as to reach the Registrar not later than 15th April of the year in which the candidate appears at the examination" after the words—"The thesis shall be submitted in triplicate" occurring in the first paragraph.

The meeting ended at 2.00 P.M. with a vote of thanks to the Chair.

Sd/-G. S. Sharma  
DEAN

## APPENDIX I

*Ref. Res No. 2 of the Faculty of Law dated (25-1-72)*

Minutes of the meeting of the Board of Studies in Law held on 25-9-70 at 12.00 noon, in the office of the Director, University School of Law, Jaipur.

## Present

- |                      |                 |
|----------------------|-----------------|
| 1. Dr. G.S. Sharma   | <i>Chairman</i> |
| 2. Dr. R.N. Varma    |                 |
| 3. Dr. I.C. Saxena   |                 |
| 4. Dr. S.N. Dhyani   |                 |
| 5. Shri Ajeet Singh. |                 |

1- Under Section 34 (4) (iv) of the University Act, the Board elected Dr. R.N. Varma as a member other than the Convener of the Board of Studies to serve on the committee for the selection of examiners in the subject for the year 1971.

2. The Board offered comments after going through some of the reports of examiners and question papers set for the examination of 1970:

Since the reports were received only at the time of the meeting, the convener was asked to go through the same and make such comments as he thought proper.

(ii) Further, Dr. I.C. Saxena, pointed out an ambiguity in the instructions in the question paper for the students in the LL. B. Final old examination relating to Transfer of Property.

The members of the Board requested the Convener to get the instructions of all the question papers examined and make such changes in them as were needed.

3. The Board scrutinised the statements of qualifications and teaching experience etc. of teachers applying for inclusion in the revised panel of examiners for 1971 and revised the panel accordingly.

(4) The Board did not recommend any changes in the courses of study and text book in law for the various examinations of the Faculty.

It was resolved to recommend that the Convener be requested to spell out further the details of the courses of Legal

Remedies paper prescribed for the LL. B. Third year Examination.

(5) It was reported that as desired by the Academic Council vide its Res. No. 40 dated the 15th Jan., 1969, a circular was sent to all the institutions inviting suggestions of the teachers in regard to the changes in the courses of study, for consideration of the Board of Studies in Law.

It was noted that no suggestions were received.

(6) The Board considered the following suggestions of the Vice-Chancellor made by him in consultation with the Convener of the Examination Reforms Committee:-

- A. Regarding award of Sessional marks, these may be awarded on the basis of Articulation, Comprehension and Objective Tests of the students as per details given below:-

*Articulation- 4 marks*

Each student may be required to write atleast one essay on the subject each term. This may be assessed by two independent teachers independently and marks recorded. Marks may be declared publicly and if any student feels aggrieved he may be explained why that particular award was given.

*Comprehension- 3 marks*

A test may be conducted each term to examine whether the students have picked up the appropriate expression, and have understood the subject matter.

*Objective Test- 3 marks*

Under this Category marking may be done but the marks may not be shown to the candidate. But the solution may be written by the teacher and posted on the notice board so that the students may know the correct answers. If this rational basis is adopted there is a change of increasing the quantum of internal assessment.

- B. As regards syllabus at the post-graduate level I suggest that-

- (I) a list of full and half courses may be prepared accordingly the availability of teaching competence.
- (ii) it may be possible for a student to offer two full courses as a topic to give specialisation in

that topic. Such a student would prepare himself for research in this topic.

- (iii) a student who wishes to learn the subject for becoming a teacher, he may offer 4 half courses covering a variety of topics to have an extensive view of the subject. In fact the students may have to choose one full and two half courses.

C. For very few bright students it may be suggested that they may be encouraged to do some self-study on pre-assigned topics which are not included in their curriculum and they may be assessed entirely on that as far as sessional marks are concerned.

The Board resolved to recommend as to 6 (A) above that the present practice be continued. And as to B, the existing courses of LL. M. examinations are already so arranged as to aim at extensive knowledge of special subjects. The scheme of full and Half courses will not suit the post-graduate classes in law. As to C this method is already existing.

(7) It was reported that Academic Council, vide its Res. No. 35 dated 21.4.70 accepted the following draft resolution proposed by Dr. Daya Krishna, Chairman, Examination Reforms Committee vide his letter No. Acd/c/1082. dated 17.4.70 as a result of discussions in the meeting of the Examination Reforms Committee held on 17th April, 1970 :—

“Resolved that in the interest of raising standards of teaching and examinations and award of degrees the Board of studies may prepare alternative Schemes of courses and Examinations in their respective subjects to be implemented as early as possible.”

Resolved to recommend that in view of the new three year course introduced by the Bar Council of India and in view of the existing choices of the students, alternative scheme cannot be introduced at the LL. B. level.

(8) The Board considered letter No. 22, dated the 6/7th January, 1970 received from the Director, School of Law, Jaipur making provision to award the students who have been awarded LL. B. (Academic) degree in terms of its resolution No. 6 (i) dated the 20th September, 1969, the LL. B. (Professional) degree on their passing the LL. B. Third Year Examination in 1970 in supersession of the LL.B. (Academic) degree, as a special case. The suggestion of the Director was considered and accepted.

(9) The Board considered Res. 5 (i) dated the 26th Oct. 1969 of the Board of Studies in Law recommending addition of Branch VII Labour Law to the branches already available for LL.M. Pt. II and authorising the convener to frame a syllabus for being placed before the Faculty of Law to recommend the syllabus for the aforesaid new branch.

Resolved that the convener and Dr. S.N. Dhyani be authorised to prepare a scheme and syllabus, etc, for Branch VII -Labour Law for LL. M. examination and send it to the Faculty d rect.

(10) The Board considered Res. No. 5 (iii) dated the 26th Oct. 1969 of the Board of Studies in Law recommending that tours to Factories and to institutions of criminal justice and administration be treated as part of the course requirement for the Diploma Course in Labour Law, Labour Welfare and personnel Management and the Diploma Course in Criminology and Criminal Administration *to work out the details of the scheme and recommend* consequential change in the relevant Ordinances/ Regulations as desired vide para 1(c) of the proceedings of the meeting of the Vice-Chancellor and the Dean of the Faculty of Law held on last November, 1969.

Dr. R.N. Varma and Dr. S.N. Dhyani were requested to workout the details of tour to factories and to institutions of criminal justice and administration for the Diploma Course in Labour Law, Labour Welfare Personal Management and the Diploma Course in Criminology and Criminal Administration. The principle of a tour being part of the scheme of examination was accepted.

(11) A complaint dated 27-4-70 received from the Principal, Govt. College, Kota against the question paper I Civil Procedure Code of LL.B. II Year (1967) Syllabus Examination along with the remarks of the paper setter was considered by the Board.

(12) A complaint dated nil received from the Head of the Law Department against the paper of company law of LL.B. II Year and LL.B. Final (Old) Examination, along with the remarks of the paper setter was also considered by the Board.

(13) A complaint dated 29-4-70 received from the Director University School of Law, Jaipur against the question paper IV Rules of Supreme Court, Rajasthan High Court etc. of LL.B. III Year examination, alongwith the remark of the paper setter was considered.

(14) A complaint dated 24-4-70 received from the Director University School of Law, Jaipur, against the question paper II Law of Crimes of LL.B. II Year Academic Examination alongwith the remarks of the paper-setter was also considered.

The convener was authorised to go into the aforesaid complaints referred to in S. Nos. 11 to 14 and the replies of the examiner's concerned and take such steps as he deems necessary.

(15) Resolved that the students who have passed a Diploma in Labour Law of Rajasthan University under the earlier scheme may be permitted to take in the examination such paper/papers which they have not taken in the examination earlier and which are prescribed under the new scheme without attending classes. They will be required to pay such-examination fee per paper as is prescribed under the University Rules for an examination in additional optional paper.

The pass marks will be 48 out of 100.

The meeting ended at 2.45 P.M. with a vote of thanks to the chair.

Sd/-G.S. Sharma  
Convener.

MINUTES OF THE SYNDICATE HELD ON  
MONDAY THE 1st FEBRUARY, 1971  
AT 10.30 A. M. IN THE UNIVERSITY  
OFFICE, JAIPUR.

**Present :**

Prof. P. L. Bhatnagar, Vice-Chancellor  
(*In the Chair*)

2. Shri D. C. Swami
3. Prof. G. C. Pande
4. Dr. G. Narayanan
5. Dr. K. C. Khanna
6. Prof. K. L. Varma
7. Dr. M. P. Mathur
8. Principal P. N. Mathur
9. Prof. R. C. Mehrotra
10. Principal (Mrs.) Rama Kochar
11. Principal S. C. Tela
12. Principal Sohan Lal

Shri L. P. Vaish, Offg. Registrar

N.B. : Shri K. C. Bakiwala and Dr. L. M. Sanghvi  
could not attend the meeting.

- (1) The minutes of the meeting of the Syndicate held on 14th December, 1970 were *confirmed* with the modification that the word- 'reported' be substituted for the word- 'made' in Resolution No. 17 (iii).

(ESTABLISHMENT SECTION)

'SECTION 'A'

- (2) With reference to Syndicate Resolution No. 5 dated the 18th December, 1967 resolving, inter-alia, that in future recommendations of the Selection Committees constituted for

the selection of teachers be treated to be effective for Six months with effect from the date of their approval by the Syndicate, the office sought clarification whether (i) appointments be made from the reserve list (drawn by the Selection Committees and approved by the Syndicate) against the vacancies that occur during the course of six months, or (ii) the Reserve List be treated valid for six months only for the number of posts vacant and desired to be filled in as on the date of the meeting of the Selection Committee or on the date of advertisement and not the posts which fell vacant subsequently during the period of six months.

*Resolved to clarify* that the recommendations of the selection Committees constituted for the selection of teachers be treated to be effective for six months w.e.f. the date of their approval by the syndicate for such posts only as were vacant on the date of advertisement.

*Resolved further* that in future while advertising the various teaching posts the number of vacant posts in each case be mentioned in the advertisement.

(3) With reference to Syndicate Resolution No. 15 dated the 13th January, 1969 granting under O. 376-F of the University Hand Book Pt. II, extension in service to Dr. P. L. Bhargava, Prof. & Head of the University Department of Sanskrit (who attained the age of superannuation viz., 60 years on 28th May, 1969) for two years, the Registrar reported that the extended term would expire on 27. 5. 1971.

In this connection the Vice-Chancellor recommended that in view of his very good work and fit state of health, Dr. Bhargava be granted extension in service for further one year w. e. f. 28th May, 1971 under O. 376-F of the Univ. Hand Book Pt. II.

*Resolved that* the recommendation of the Vice-Chancellor be accepted.

Arising out of the above the Syndicate *Further resolved that* the State Government be requested to re-consider the question of the age of superannuation of teachers in the affiliated colleges and raise the same to 60 years which would be in keeping with general trend in the country in connection with the retirement age of the teachers.



(4) The Syndicate *postponed* consideration of the request of Dr. Rama Kant Mittal, University Lecturer in Chemistry for counting the period of leave without pay, in accordance with O.357B-1 (b) of the Univ. Hand Book Pt. II and Rule 10 of 'Study Leave Rules', from 24-10-1967 to 24-10-1970 towards earning his three annual grade increments which he would have earned on 19th October, 1968, 19th October, 1969 and 19th October, 1970 if he has not proceeded on leave without pay.

(5) *Resolved that* as suggested by the Head of the University Department of Chemistry the following minimum qualifications be prescribed for the newly created post of Micro-Analyst in the Department of Chemistry in the grade of Rs. 400-40-800-50-950 :

“Master's Degree in Chemistry or physics/M. Tech. (Electronics) /B. Sc D. R. E. , with special training in instrumentation like CH, detemination, I. R. UV Spectra and capacity to locate faults and carry out minor repairs in chemical instruments. ”

(6) The Syndicate considered the request of Dr. J. L. Bansal, University Lecturer in Mathematics received through the Head of the Department of Mathematics and the Dean, Univ. Studies in Science for the grant of leave without pay for one year with permission to serve the University of Jodhpur as Reader in Mathematics.

*Resolved that* under Rule No. 4 of the 'Rules for deputation of University teachers to take up assignment outside the University Dr. Bansal be granted leave without pay for one year only so as to enable him to join the University of Jodhpur.

(7) with reference to Syndicate Resolution No. 16 dated the 13th January, 1959 under which Dr. G. N. Sharma (then University Reader in History and subsequently promoted as Professor ex-cadre w. e. f. 10th April, 1970) was granted, under O.376-F of the Univ. Hand Book pt. II, extension in service for two years after having attained the age of superannuation viz., 60 years on 2-5-1969, the Registrar reported that the extended term would expire on 1-5-1971.

In this connection the Syndicate also considered D.O. letter No. 16 dated 11th January, 1971 addressed by the Head of the University Department of Indian Culture to the Vice-Chancellor recommending strongly further extension in service for one year to Dr. Sharma in view of his eminence as a scholar and meritorious research work in his Department.

*Resolved that* under 0.376-F of the Univ. Hand Book Pt. II Dr. G.N. Sharma be granted extension in service for further one year w.e.f. 2-5-1971.

(8) The Syndicate considered the recommendations of the Selection Committees constituted under S.20 for the selection of teachers in the following subjects, made at their meetings held on the dates noted against each :

S.N.	Subject	Post	Date	Vide Appendix
1.	Psychology	Professor	23-1-31	I
2.	Psychology	Lecturer	23-1-71	II
3.	Public- Administration	Professor	25-1-71	III
4.	Public- Administration	Lecturer	25-1-71	IV
5.	Business Administration	Professor	28-1-71	V
6.	Botany	Reader	28-8-71	VI

*Resolved that* the recommendations of the aforesaid Selection Committees be accepted and accordingly appointment letters be issued immediately.

(9) The Syndicate considered the recommendations of the Selections Committee constituted under S.20 for the selection of Professor & Director for the University Institute of Correspondence Studies, made at its meeting held on 27-1-1971 (*Vide Appendix-VII*).

In this connection the Syndicate felt that there was a confusion in respect of the nomenclature of the post as to whether it should be 'Professor' or 'Director' or 'Professor &

Director'. The Syndicate was of the view that the designation of the post be 'Director' as already decided vide its Res. No. 9 dated 15-12-1969 on the recommendation of Academic Council made vide Res. No. 22 dated 22nd March, 1969.

*Resolved that* consideration of the recommendations of the aforesaid Selection Committee be *postponed* and meanwhile a clarification be sought from the Academic Council in regard to the nomenclature of the post and the Council be also requested to recommend minimum qualifications for the post of Director of the Institute of Correspondence Studies.

(10) With reference to its Res. No. 2 dated 14-12-1970 the Syndicate considered the recommendations dated 10-8-1970 of the Committee for selection of a candidate for the post of Reader in the University Department of Economics (vide *Appendix-VIII*), together with the information given by the Vice-Chancellor that he had received a letter from Prof. E. Scott Maynes saying that Dr. Ram Chandra Ramnathan (who had been selected by the aforesaid Selection Committee for the Reader's post) was unwilling to join the University unless he was offered the post of a professor.

*Resolved that* in view of the information given by the Vice-Chancellor the Reader's post be re-advertised.

(11) The Syndicate considered the request of Dr. Raj Krishna, Prof. & Head of the University Department of Economics as contained in his letter No. De/USA/71/41 dated 12/16th January, 1971, forwarded by the Dean, University Studies in Arts, to the effect that he be allowed special leave of three days every month to attend the meetings of the Life Insurance Corporation of India (including the time required for travel) as he had been appointed a member of the Central Board of the L.I.C. by the Government of India in terms of a notification in the Gazette of India in September last.

*Resolved that* the aforesaid request of Dr. Raj Krishna be acceded to, as a special case, so long as he continued to be a member of the Central Board of the Life Insurance Corporation of India.

## SECTION 'B'

(12) The Registrar reported the following orders of the Vice-Chancellor :—

- (i) [With reference to Syndicate resolution No.17 dated 14-12-1970 granting an extension of study leave without pay for one year to Dr.N.K. Kotia, University Lecturer in Chemistry from 24-8-1970 to 23-8-1971 so as to enable him to complete his research work at the University of Florida, U.S.A.], orders dated 5-12-1970 to the effect that (a) Dr. Kotia be allowed to resume duties on 23-12-1970 before the expiry of the leave on account of his illness at U.S.A and (b) leave without pay not availed of by Dr. Kotia from 23-12-1970 to 23-8-1971 be treated as cancelled.
- (ii) Orders dated 29-12-1970 granting House Rent allowance to Dr. M.K. Pandya, University Reader in Geology w.e.f. 1-1-1970 instead of from 26-8-1970 the date on which he made an application for the same in relaxation of Rule 6 (iii) of the Rajasthan University House Rent Allowance Rules 1970 in view of the fact that Dr. Pandya's landlord was out of station and as such he could not execute the rent-deed in time.
- (iii) Orders dated 4th January, 1971 granting house rent allowance to Dr. S. Loknathan, University Professor of Physics with retrospective effect i.e. from 10th July, 1969 the date on which he joined the University service and took an accommodation on a monthly rent of Rs. 300/- p.m. in relaxation of Rule 6 (iii) of the Rules for the grant of House Rent allowance to the University employees in view of the fact that rented house w.e.f. 10th July, 1969 and (b) he could not submit the required stamped rent deed etc. as per rules, but sent the receipt of the land lord.

- (iv) Orders dated 22nd January, 1971 permitting Dr. Satyendra, University Professor of Hindi for delivering lectures at the following Universities in the month of February, 1971 for about 2 weeks, as requested by the Dy. Director (Extn.) Govt. of India, Central Hindi Directorate Ministry of Education, New Delhi vide his letter No. F. 5-4/70-EPB dated 13-1-1971 :—

- (1) University of Mysore
- (2) University of Kerala
- (3) University of Madras
- (4) Dakshin Bharat Hindi Prachar Sabha, Madras.

N.B. : T.A. & D.A. of Dr. Satyendra for the above purpose would be met by the Government of India.

- (v) Orders dated 16-1-1971 sanctioning duty leave to Dr. R.C. Mehrotra, Prof. & Head of the University Department of Chemistry for four days from 19th to 22nd January, 1971 in connection with his visit to Berhampur University as a member of an Expert Committee appointed by the University Grants Commission to consider their revised Fourth Plan Development proposal.
- (vi) [With reference to Syndicate Resolution No. 12 dated 14-8-1970 granting study leave to Shri S.C. Hada, University Lecturer in Commerce who was also looking after the administrative work of the Institute of Correspondence Studies] orders dated 5-12-1970 sanctioning an allowance of Rs. 100/- p.m. to Shri M.C. Jain, Lecturer in Hindi in the Institute of Correspondence Studies vice Shri S.C. Hada.
- (vii) Orders dated 19th January, 1971 sanctioning house rent allowance to Miss Santosh Gupta, Lecturer in English, University Maharani's College as a special

case with retrospective date viz., 1-7-1970 in relaxation of Rule No. 6 (iii) of the House Rent allowance Rules in view of the fact that her land lady was not in the town and she could not, therefore, submit her claim in time.

*Resolved that* the aforesaid orders of the Vice-Chancellor be confirmed.

## (EXAMINATION & SECRECY SECTIONS)

### SECTION 'A'

(13) *Resolved that* as unanimously recommended by the Referees the degree of Ph.D. of the University be conferred upon the following candidates on the subjects noted against each:

S.N.	Name	Subject
1.	(Miss) Asha Pendse :	"A study in operational calculus."
2.	Shri U.D. Tripathi	"Organic Derivatives of Yttrium, Ytterbium and some other Lanthanide elements."
3.	(Mrs.) Nora Choudhary	"India in modern Indian Fiction."

(14) The Registrar reported that :

- (i) The thesis on the subject—"The English poetic drama of the later half of the nineteenth century" submitted by the candidate Shri P.C. Joshi for the award of the degree of Ph.D. of the University was referred for evaluation to two external examiners ( 'A' and 'B' ) and the Supervisor.
- (ii) 'A' and the Supervisor recommended the award of the degree to the candidate where as 'B' recommended revision of the thesis.
- (iii) In view of the divergence of opinion between the external examiners, the reports were exchanged as

per rules. On exchange of reports, 'B' stuck to his original recommendation and 'A' who had originally recommended the award of the degree to the candidate, agreed with 'B' and recommended a revision of the thesis.

- (iv) Since both the external examiners had agreed to a revision of the thesis, the candidate was asked to revise the thesis.
- (v) The revised thesis when received was referred to the same external examiners for evaluation who recommended further revision of the thesis, and
- (vi) According to O-139 of the University Hand Book Pt. II a thesis could not be allowed to be revised more than once.

*Resolved that* the thesis submitted by Shri P.C. Joshi be rejected.

(15) With reference to Syndicate Resolution No. 14 dated the 14th December, 1970, the Registrar reported that after consulting the Dean, Faculty of Law, the Principal, Dayanand College, Ajmer was requested to cancel the admission of the 18 students who had been wrongly admitted to LL.B. First Year class in his college as they were not eligible as per the requirement laid down in the relevant O.252 of the University Hand Book Pt. II

In this connection the Syndicate considered letter No. 1261 dated the 18th January, 1971 of the Principal, Dayanand College, Ajmer requesting the Vice-Chancellor to condone, under his emergency powers, this bonafide mistake in their admission and to persuade the Syndicate on compassionate grounds in the interest of so many innocent sufferers together with the views expressed by the Dean, Faculty of Law (to whom a reference was made in the matter) recommending for sympathetic consideration.

*Resolved that* (i) in view of the principal's letter cited above and the recommendation of the Dean the mistake committed by the admitting authority be condoned as a special case and the admission of the 18 students be regularised and (ii) a letter addressed to the Principal of the College, communicating the displeasure of the Syndicate for the grave irregularity committed in the matter of aforesaid admission and adding that in the event of repetition of such mistake the Syndicate might consider withdrawing affiliation.

(16) The Registrar reported the orders that 11th January, 1971 of the Vice-Chancellor in postponing the University examinations by ten days on account of the ensuing elections to the Lok Sabha. In this connection the Syndicate was further informed about receipt of a letter from the Education Commissioner, Rajasthan asking the University not to commence any examinations before 5th April, 1971 in view of the elections to the Lok Sabha and the Census operations in the State.

*Resolved that* (i) the orders of the Vice-Chancellor be confirmed and (ii) he be authorised to decide finally about the date of commencement of the examinations.

(17) With a view to expediting declaration of results of the University Examinations the Syndicate *approved* of the Vice-Chancellor's proposal that all tabulation work be got done at the University Headquarters.

Arising out of the above the Syndicate *further resolved* that in supersession of the existing system of appointing tabulators out of the specified categories earlier approved by the Syndicate, the Vice-Chancellor be authorised to appoint tabulators at his discretion with reference to their proficiency in doing figure work.

(18) The Syndicate considered the report of the Enquiry Committee appointed by the Vice-Chancellor consisting of Dr. K.C. Khanna (Convener) and Shri K.K. Sharma, Judge, Rajasthan High Court, Jaipur and to which Mr. M.P. Jain, P.S. to Vice-Chancellor worked as the Secretary and *resolved as follows* :



- (i) The contents of the report submitted to the Vice-Chancellor on 29-1-1971 be recorded.
- (ii) The two tabulators, namely Shri A.N. Saxena, Lecturer in Seth Motilal College, Jhunjhunu and Shri K.K. Pathak, Lecturer, S.S.G. Pareek College, Jaipur, who have been found guilty of tampering with the Tabulation Registers with a view to inflate the marks of certain roll numbers be debarred for ever from remunerative work concerning the examinations of the University including the tabulation work.
- (iii) The Governing Bodies of the institutions/Government of Rajasthan (as the case may be) be requested to dismiss the aforesaid two employees for their dishonest behaviour.
- (iv) A fresh committee consisting of the following be re-appointed to go into the details of the report and also to suggest reforms in the working of examination and secrecy cells:
  - (1) Dr. K.C. Khanna (*Convener*)
  - (2) Dr. G.C. Pande
  - (3) Dr. R.C. Mehrotra, and
  - (3) Shri D.C. Swami
- (v) A letter of gratefulness of the University be issued to the members of the Enquiry Committee, and
- (vi) A token honorarium of Rs. 1,000/- be paid to Shri K.K. Sharma, hon'ble member of the Enquiry Committee in appreciation of his help to the University.

#### SECTION 'B'

(19) The Registrar reported the following orders of the Vice-Chancellor:

- (i) [With reference to Syndicate resolution No.11 dated 14-12-1970] orders dated the 15th, 16th, 17th and

18th December, 1970 in approving the award of the Ph.D. Degree to the following candidates who were unanimously recommended for the award of the degree by the referees before the Convocation, on the subjects noted against each:

S.No.	Name	Subject
1.	Shri S.S. Jhala	"The state of Indian Society as depicted in the Ancient Puranas."
2.	(Mrs.) Rajendra Jindel	"Culture of a sacred town (A sociological study of Nathdwara)."
3.	Shri M.A. Zaidi	"Dagh's contribution to Urdu literature."
4.	Shri A.F.I. Usmani	"Contribution of Non-muslims towards Urdu Literature in Rajasthan."
5.	Shri R.S. Sharma	हिन्दी के प्रबन्ध काव्यों में नल कथा की संस्कृत परम्परा की अवतारणा ।"
6.	(Mrs.) Prabha Saxena	"श्रीमती ऊषा देवी मित्रा-व्यक्तित्व और कृतित्व"
7.	Shri P.D. Anil	"Some problems in Hydro-Dynamics and hydromagnetic Stability."
8.	Shri H.C. Bhartiya	"The effects of radiation on the gastrointestinal tract and associated glands in the Indian desert garbil (Meriones Harrianae Jerdon)".
9.	Shri G.R. Varma	"Costing System in Engineering Industry in India."
10.	Shri B.P. Sharma	"The role of Commercial banks in India's developing economy 1951-1969."
11.	Shri V.S. Shivpuri	"Effects of radiation on the necessary reproductive organs of certain mammals."

S.No.	Name	Subject
12.	Shri K.S. Gupta	“Kinetics and mechanism of the reduction of Thallium (iv).”
13.	(Mrs.) Jasbir Jain	“Liberal Humanism of George Orwell.”
14.	Shri R.S. Khandelwal	“Investigation of proper motions of stars four comparison paris Astrogrephis catalogues and Potsdam Photographiche Himmol Karti.”

*N.B. :* A viva-voce examination of all the candidates except Sl. No. 13 was held to the satisfaction of the examiners. In the case of the candidate at sl. No. 13 viz., (Mrs.) Jasbir Jain no viva-voce examination was held because she was registered under the old rules and the examiners did not recommend it.

(ii) With reference to Syndicate Resolution No. 36 dated 20th October, 1953 and subsequent Res. No. 2 (i) dt. 28-11-1953 (regarding punishment awarded to the assaulters of Dr. A. Rathore), orders dated 5-12-1970 in granting a migration certificate to Shri Krishna Chandra Pancholi, one of the assaulters, who applied for the same, in view of the fact that a period of 17 years had already passed since the above decision was taken.

(iii) Orders dated 24-1-1971 in awarding punishment (cancellation of December, 1970 examination and further debarring him from appearing in the examination to be held in June, 1971) to a candidate Shri Rishabh Chand Jain, Roll No. 29 of the Second Ayurvedacharya Examination of December, 1970 who was found using unfair means on 7-12-1970.

*Resolved that* the aforesaid orders of the Vice-Chancellor be confirmed.

## {ACADEMIC SECTION}

## SECTION 'A'

(20) With reference to its Res. No. 19 dt. 14-12-1970 the Syndicate considered the recommendations of the University Board of Sports made at its meeting held on 6th August, 1970 (*vide Appendix-IX*).

Resolved that the recommendations of the Sports Board be approved with the following modifications/observations :

(I) *Ref. Resolution No. II (E) of the Board :*

The Director of Education, Rajasthan be requested to fix up the order of holding Annual Inter-Collegiate Women's Tournaments of the University.

(II) *Ref : Resolution No. II (G) of the Board*

No action as called for as the Syndicate vide its Res. No. 27 dated the 28th Sept, 1970 on the recommendation of the Academic Council had already liberalised the concession in marks in the case of players for admission to higher courses of study.

(III) *Ref. Resolution No. II (I) of the Board*

Two captains of University Teams in the various games by rotation be appointed as member of the University Sports Board every year.

*Resolved further* that O.341 and O.342 of the Univ. Hand Book Pt. II be consequently amended so as to read as follows :

“O.341-

The University shall have a Board of Sports which shall consist of :

- (1) Two members of the Syndicate to be appointed by the Syndicate,
- (2) One Professor or Head of a University Teaching Department to be nominated by the Vice-Chancellor,
- (3) Four Physical Instructors/Directors; three of whom shall be from the affiliated Colleges appointed by the Syndicate and one from the Uni-

versity Colleges/Teaching Departments to be nominated by the Vice-Chancellor.

- (4) Principal/Director of the college holding the University Women's Tournaments,
- (5) Principal/Director of the College where Athletic Meet (for Men) is to be held.
- (6) Two captains of University Teams in the various games nominated in rotation by the Chairman, University Sports Board every year, and
- (7) Director of Physical Education either of the University Teaching Departments or any of the University Colleges to be nominated by the Vice-Chancellor (Member-Secretary).

The Syndicate shall appoint a Chairman from among the local members (other than the student members) of the Board."

"0.342.

The members of the Board (other than those under clauses 4, 5 and 6 of 0.341) shall hold office for three years."

*(IV) Ref : Resolution No. II(J) of the Board Consideration be deferred.*

(21) With reference to its Res. No. 25 dated the 14th December, 1970 the Syndicate considered the Annual Report of the University for the year 1969-70 under S.22(1) as drafted by the Registrar for submission to the Senate.

After making the following observations the Syndicate *resolved to recommend* that the Annual Report for the year 1969-70 be adopted :

- (I) Typographical errors in the cyclostyled report as pointed by Prof. K. L. Varma be corrected before the printed report is submitted to the Senate.
- (II) A paragraph about the finances of the University during the year under review be included in the report.

(III) Information regarding fresh affiliation grants from July, 1970 as given vide pages 29-33 of the cyclostyled Report be omitted from the Report which was for the year 1969-70 and instead it be included in the Annual Report for the year 1970-71.

(iv) The figures of the examinees as mentioned under paragraphs 1 and 15 of the Report be checked up and reconciled.

(v) A consolidated statement of the results of the Main and Supplementary examinations taken together of the year 1970 be given after the statement about the results of the Supplementary Examination of 1970 (vide pages 40-41 of the cyclostyled Report).

(22) With reference to Syndicate Resolution No. 14 dated 7.11.1970 clarifying that a teacher covered under note to 0.65 of the University Hand Book Pt. II (regarding non-applicability of the minimum qualifications) was not eligible for appointment to a higher post such as Headship of a department or principalship of an affiliated college automatically and desiring the Director of Education to send individual cases for consideration, the Syndicate considered the cases of the following five teachers received from the Director of education, Rajasthan with the recommendation that in view of their very long experience of teaching and good work they be exempted from the minimum qualifications for appointment to higher posts of post-graduate heads and Principals of Degree Colleges :

<i>Name &amp; Designation</i>	<i>Deficiency</i>
1. Shri C. S. Kulshrestha. Senior Lecturer in Commerce. (Joined as Lecturer in the year 1946).	Master's Degree in III Division.

- |  |  |
|--|--|
| 2. Shri P. M. Mathur,<br>Senior Lecturer in<br>Physics<br>(Joined as Lecturer in<br>the year 1947).      | Master's Degree in<br>III Division.  |
| 3. Shri P. S. Srivastava,<br>Senior Lecturer in<br>English.<br>(Joined as Lecturer in<br>the year 1943). | Master's Degree in<br>III Division.  |
| 4. Shri R. C. Mittal,<br>Senior Lecturer in<br>Economics.<br>(Joined as Lecturer in<br>the year 1946).   | Master's Degree in<br>III Division.  |
| 5. Shri R.R.G. Kher,<br>Senior Lecturer in<br>Mathematics.<br>(Joined as Lecturer<br>in the year 1945).  | (1) Master's Degree in<br>III Division, and<br><br>(2) Does not possess<br>three years experi-<br>ence of teaching<br>post-graduate classes. |

*Resolved that* the aforesaid teachers be exempted from the minimum qualifications for appointment to higher posts of Post-graduate Heads and Principals of Degree Colleges.

(23) The Syndicate considered a letter No. C/166986 dated 22/12/1970 from the Secretary-General, Association of Commonwealth Universities, London, inviting the Vice-Chancellor to attend the Conference of Executive/Heads of the member universities to be held at Legon (Ghana) from 30th August to 6th September, 1971.

*Resolved that* ( i ) the Vice-Chancellor may attend the aforesaid Conference to be held at Legon (Ghana) and ( ii ) actual air return journey as well as out of pocket expenses be sanctioned to him for the purpose.

(24) With reference to its Res. No.31 dated the 1st July, 1969 approving inter-alia the recommendation No. 33 dated 1/2nd June, 1969 of the University Sports Board to the effect that one of the functions of the Sports Board shall be to control and supervise the administration of the University Swimming Pool, the Syndicate considered letter No. DPE/44/474 dated the 21st/26th August, 1970 from the Director of Physical Education for the Main Campus of the University containing his observations about the working of the Pool and requesting that either he as Director of Physical Education or the Chairman, University Sports Board be relived of the supervisory and administrative control over the University Swimming Pool so as to place the pool completely under one authority.

*Resolved that* a Committee consisting of the following members be appointed to go into the whole question of the administrative and supervisory control of the University Swimming Pool and also review the existing Rules for the use of the Swimming Pool:

1. Prof. R.C. Mehrotra (Convener)
2. Prof. G.S. Sharma
3. Prof. K.L. Verma
4. The Chairman, Univ. Sports Board, and
5. Shri J. Mukerjee, Director of Physical Education for the University Campus, (Member-Secretary).

(25) The Syndicate considered the following proposals of Prof. K.L. Verma, Member Syndicate, as contained in his letter No. 9 dated 31.12.1970 :

- (1) An Ordinance be framed authorising the Vice-Chancellor to get marked answer-books revaluated in any genuine case of injustice coming to his notice and not covered by the existing Ordinances concerning scrutiny and revaluation.
- (2) Two years course leading to the Academic Degree in Law may be/thrown open to:
  - ( i ) Evening Colleges,



( ii ) The University also may hold such classes in the evening and suitably arrange with their timings of the third year Law classes in the day.

- (3) In view of the fact that a student at the post graduate level is invariably tempted to offer dissertation in lieu of a paper for the former always pays much higher dividends than the latter it is desirable that the machinery concerning it be reviewed thoroughly so as to ensure real academic efficiency or else the option to offer dissertation in lieu of a paper be abolished.

*Resolved that* (a) proposals No. 1 and 3 above be referred to the Academic Council and (b) proposal No. 2 be referred to the Dean , Faculty of Law for his views.

(26) With reference to Syndicate Resolution No. 17 dated 15th December, 1969 read with its Res. 24 dated 28-9-1970 appointing a Committee consisting of Dr.G.Narayanan, Dr. P. N. Mathur and Prof. G. C. Pande (Convener) to examine the proposal of Principal P. N. Mathur of Government College, Ajmer to the effect that the University might honour every year teachers who did distinguished and meritorious work in their respective branches or fields of study by giving them merit awards at the time of Convocation, the Registrar reported that Dr. Mathur (the mover of the proposal) has since withdrawn his said proposal.

*Resolved that* the report be recorded.

(27) With refrence to its Resolution No. 34 dated the 14th August, 1970 the Syndicate considered the recommendations dated the 15th December, 1970 of the Committee appointed to examine the observations made by the Senate vide its Resolution No. 11(iii) and (iv) dated 21st March, 1970 regarding amendment in S. 90-A and S. 95 of the University Hand Book Pt. II.(*Vide Appendix-X*).

*Resolved that* the report of the Committee be adopted with the observation that (a) the questions and answers given

in a meeting of the Senate need not form part and parcel of the proceedings of the Senate and (b) suitable changes in the existing rules (Regarding questions and answers in a meeting of the Senate be made so as to provide for supplementary questions on the lines of the pattern followed by the University of Madras.

*Resolved further that consequential draft amendments to the relevant Statutes be placed before the Syndicate for consideration at its next meeting.*

(28) The Syndicate considered letter No. F. 2 (I) Edu/II/68 dated 9-12-1970 from the Deputy Secretary to Government of Rajasthan, Education Department requesting that Shri V. V. Vajpayee who had been appointed Principal, Government Teachers Training College, Bikaner (upgraded as Post-graduate College w.e.f. July, 1970) be granted exemption from the condition of having at least 5 years experience of teaching Post graduate classes in a teachers Training College as required under 0.65 of the University Hand Book pt. II in view of the fact that Shri Vajpayee had worked as Lecturer of B.Ed. classes for about 7 years and as Principal of a B.Ed. college for about 3½ years and was the senior most person due for promotion to the post of Principal of M.Ed. College.

In this connection the Registrar reported that (i) Shri Vajpayee possessed the requisite academic qualifications and total teaching experience except that he did not possess five years experience of teaching Post-graduate classes in a Teachers' Training College as required under the Ordinance and (ii) there was a provision in 0.65 XI (C) (2) of the University Hand Book Pt. II that the condition of five years teaching experience of Post-graduate classes might be waived by the Syndicate in exceptional cases.

*Resolved that Shri V.V. Vajpayee be exempted from the minimum qualifications laid down by the University for the post of Principal of a Post-graduate Teachers' Training college.*

(29) The Syndicate considered and *approved* the revised scheme of printing and circulation of the minutes of various bodies of the University, as proposed by the *office* (*Vide Appendix-XI*).

(30) The Syndicate considered the recommendations of the Committee reconstituted vide Syndicate Resolution No.19 dated 1st May, 1969 for considering the suggestions for revising the Teacher Agreement Form for teachers of non-Government affiliated Colleges and suggesting amendments to the relevant Ordinances of the University Haud Book Pt. II (*Vide Appendix-XII*).

The Syndicate appreciated the work done by the Committee and *resolved that* the recommendations made by it be approved.

*Resolved further* that the State Government be requested to adopt the revised Teacher Agreement Form for purposes of the grant-in-aid rules for the non-Government affiliated Colleges.

(31) The Syndicate considered the proposed site for constructing the buildings for (i) Department of Botany, (ii) Central Workshop and (iii) Men's Hostel with the grants approved by the University Grants commission for the purpose and also the plans and estimates for the first two buildings,

In this connection the Syndicate was informed that the University Grants Commission had, approved a grant of Rs. 5.00 lacs for constructing a building for the Department of Botany and Rs. 1.00 lac for a building for the Central work shop.

Resolved that (i) the Central Workshop be located between the Vigyan Bhawan and the Guest House as recommended by the Committee appointed by the Vice-Chancellor and (ii) the Vice-Chancellor be authorised to (a) decide about the site for the Botany Department building in consultation with Prof. P.N. Srivastava and Prof. B. Tyagi, (b) decide

about the site for the building of the Men's Hostel and (c) approve the plans and estimates for the aforesaid buildings.

(32) The Vice-Chancellor informed the Syndicate that certain deposits of the University amounting to Rs. 6 lacs approximately were about to mature and he proposed that the same be utilised for construction of about 10 units of residential quarters each for (a) class IV staff, (b) ministerial and administrative staff and (c) teaching staff.

*Resolved that* The Vice-Chancellor's proposal be approved and the details of the proposal be placed before the Finance Committee.

(33) With reference to its Resolution No.19 dated the 12th December, 1966 increasing the amount of retainership fee paid to the Legal Adviser from Rs. 1000/- to Rs. 1800/- p.a., the Syndicate considered request of the Legal Adviser Shri Chandra Mohan Mathur as contained in his letter dated 30th June, 1970 read with that of 11th January, 1971 for increasing the retainership fee to at least Rs.500/- per month.

*Resolved that* a Committee consisting of the following members be appointed to examine the request of the Legal Adviser as also the question of creating a Legal Cell in the University office consisting of the legal Adviser, one part-time Stenographer, one whole-time L.D.C. and one whole time Class IV servant:

(1) Prof. G.S.Sharma (Convener)

(2) Prof. G.C.Pande

(3) Shri D.C.Swami.

(34) With reference to the Syndicate Resolution No. 42 dated the 14th August, 1970 confirming the action taken by the Vice-Chancellor in extending, as a special case, the provisional affiliation of Nehru College of Education, Hindaun City for one year i.e. for the B.Ed. examination of 1971 subject to certain conditions, the Registrar reported that: -

- (1) A compliance report which was due to be submitted by 31st october, 1970 had not been received so far despite several reminders.
- (2) In the meanwhile the Vice-Chancellor received a letter dated 14-12-1970 from Shri I.P.Arora, Principal of the College informing him that Shri Om Prakash the dissociated Secretary was still interfering in the College affairs, posing himself as Secretary and misbehaved with the Principal. A further letter dated 21-12-1970 was received from the Principal informing the Vice-Chancellor that the Principal's room was locked, the students were sent away and notices were circulated among the members of the staff and students on 15-12-1970 under the signatures of Shri Om Prakash Sharma that the services of Principal Arora were terminated etc. etc.
- (3) The Vice-Chancellor appointed a single-member Inspection Committee consisting of Shri S.S. Saxena Retd. Director of Education Rajasthan and (Retd. Director, Rajasthan College, Jaipur) to pay a surprise visit to the College as soon as it reopened after winter-break and give his detailed report in respect of the affairs of the college as a whole the position about the fulfilment of the conditions of affiliation and the complaints lodged by the Principal together with his opinion about the suitability of the college to continue beyond the current academic session.
- (4) A letter dated 30th Dec., 1970 was sent by the office under orders of the Vice-Chancellor to the president of the college Shri K.L. Tewari apprising him of the situation as revealed by the Principal and requesting him to give his personal attention to the matter and send a report for the perusal of the Vice-Chancellor and also asking him to remain

in Hinduau from 1st January, 1971 so that the Inspection Committee to be deputed by the Vice-Chancellor might be able to contact him on the spot.

- (5) No reply from the President had been received so far and according to the Inspection Committee the President was not present in Hindaun at the time of the inspection which was conducted on 4th January, 1971.
- (6) As promised in his letter dated 29-7-1970 the President did not set up an Enquire Committee and instead he informed this office that he deemed it fit to go into the details himself personally and on cursorily going through the papers he did not find any irregularity.

In this connection the Syndicate considered the Inspection Report submitted by the single-member Inspection Committee referred to vide para (3) above.

*Resolved that* (i) Nehru College of Education, Hindaun City be dis-affiliated after the B.Ed. examination of 1971, (ii) the Management be informed accordingly and (iii) a notification to this effect be also issued in 2 or 3 papers.

- (35) The Syndicate considered a request of Dr. Om Prakash, Director, University College of Commerce, as contained in his letter No. R-107 dated 23rd January, 1971 for (i) providing necessary financial assistance for Air travel and other expenses and (ii) granting duty/academic leave for about one month, for attending the XVIII International Meeting of the Institute of Management Science to be held in Washington on March 21-24-1971 and visiting certain Universities adding that he was contributing a paper entitled—‘The Problems of Consistency in Personnel Management Policies’ which had been accepted for discussion at the aforesaid meeting.

*Resolved that* Dr. Om Prakash be informed that 50% air-fare by economy class out of the un-assigned grant of the U.G.C. and 25% air-fare out of the University resources could be granted provided he was prepared to meet 25% air fare and other expenses himself.

### SECTION 'B'

(36) The Registrar reported the following orders of the Vice-Chancellor.

- (1) Orders dated 15th December, 1970 sanctioning a grant of Rs. 500.00 to the Principal, Dungar College Bikaner for organizing a seminar on Linguistics in Hindi at Bikaner on December 25-26-1970.
- (ii) With reference to the Syndicate Res. No. 40 (i) dated 5th Feb., 1970 confirming the orders dated 4th Nov., 1969 of the Vice-Chancellor prohibiting the use of the University Guest House for marriage purposes w.e.f. 1st July, 1970, orders dated 19th January, 1971 giving clarification, on a point of interpretation, that the Guest House either completely or partially, could be given for stay of such guests as come as members of marriage parties or in connection with marriages, provided that no marriage ceremony (including the starting of the marriage procession) should be performed in the Guest House.
- (iii) With reference to the Syndicate Resolution No. 25 dated 14th August, 1970 permitting Lal Bahadur Shastri Evening College, Jaipur to function in the Rajasthan College Campus buildings for one more year ending in June, 1971, orders dated 27-1-1971 to the effect that the authorities of the L.B.S. College be informed in clear terms that it would no longer be possible for the University to allow the college to function in the University buildings and

that they must make alternative arrangements for the functioning of the L.B S. College w.e.f. the next session 1971-72.

Resolved that the aforesaid orders of the Vice-Chancellor be confirmed.

(37) Consideration of remaining items on the agenda (relating to the Accounts & Finance Section) was *postponed*.

Sd/-P.L. Bhatnagar  
Vice-Chancellor

Sd/-L.P. Vaish  
Offg. Registrar



## APPENDIX I

(Ref. Syndicate Reso. No. 8 dated 1st Feb., 1971)

Minutes of the Selection Committee meeting for the selection of Professor of Psychology held on 23rd January, 1971 at 1.00 P.M. in the Syndicate Hall of the University office.

The following were present :

- |   |                                    |
|---|------------------------------------|
| 1. Dr. P.L. Bhatnagar,<br>Vice-Chancellor   | <i>Chairman.</i>                   |
| 2. Dr. G.C. Pande,<br>Prof. & Head of the Deptt.<br>of History and I.C.,<br>University of Rajasthan,<br>Jaipur. | <i>Dean, Faculty of<br/>Arts.</i>  |
| 3. Prof. K.L. Varma,<br>Jaipur.   | <i>Member, Syndicate.</i>          |
| 4. Dr. Daya Krishna,<br>Prof. & Head of the<br>Department of Philosophy,<br>Jaipur.                             | <i>Head of the<br/>Department.</i> |
| 5. Prof. B.C. Ganguli,<br>Deptt. of Psychology,<br>Delhi University, Delhi.                                     | } Experts.                         |
| 6. Prof. H.S. Asthana,<br>Head, Deptt. of Psychology,<br>Sagar University, Sagar.                               |                                    |
| 7. Dr. R. Rath,<br>Prof. & Head of the Deptt.<br>of Psychology, Utkal U'sity,<br>Bhubneshwar.                   |                                    |

Out of the eight candidates called for interview, the following three turned up before the Selection Committee :—

1. Dr. Sachidanand Sinha, Jaipur
2. Dr. V.K. Mittal, Meerut, and
3. Dr. V.K. Singh, New Delhi.

In addition, the Committee also considered, in absentia, the candidature of the following :—

1. Dr. Shrichand, Lucknow (He had regretted his inability to come for interview)
2. Dr. Surendra Singh Sodhi, U.S.A.
3. Dr. S.S. Anant, Canada.

The Committee recommends that none is suitable for appointment as the Professor of Psychology.

**Sd/-P.L. Bhatnagar.**  
*Vice-Chancellor.*

## APPENDIX II

(Ref. :-Syndicate Res. No. 8 dated 1st. Feb. 1971)

Minutes of the meeting of the Selection Committee for the Selection of a Lecturer in Psychology held on the 23rd January, 1971 at 5 P.M. in the Syndicate Hall of the University office.

The following were present :—

- |  |                                   |
|--|-----------------------------------|
| 1. Dr. P.L. Bhatnaga,<br>Vice-Chancellor   | <i>Chairman</i>                   |
| 2. Dr. G.C. Pandey,<br>Prof. and Head of the<br>Deptt. of History and Indian<br>Culture, U'sity of Rajasthan,<br>Jaipur. | <i>Dean, Faculty of<br/>Arts.</i> |
| 3. Prof. K.L. Varma,<br>Jaipur.  | <i>Member,<br/>Syndicate.</i>     |
| 4. Dr. Daya Krishna,<br>Prof. and Head of the<br>Deptt. of Philosophy,<br>U'sity of Rajasthan, Jaipur.                   | <i>Head of the<br/>Department</i> |
| 5. Prof. H.C. Ganguli,<br>Deptt. of Psychology,<br>Delhi University,<br>Delhi.   | } <i>Experts.</i>                 |
| 6. Prof. H.S. Asthana,<br>Head, Department of<br>Psychology, University of<br>Sagar, sagar.                              |                                   |

Out of the six candidates called for interview, the following 4 turned up before the Selection Committee :—

1. Dr. Jagdish Pandey, Jaunpur
2. Shri K.L. Sharma, Jaipur
3. Shri Uday Chand Jain, Jaipur and
4. Shri Vijay Kishore Varma, Agra.

The Committee recommends the following in order of preference :—

1. Shri K.L. Sharma : 31 years.  
B.A., II—1959  
M.A. (Psychology) III—47%—1961  
M.A. (Philosophy) II—55.4%—1963

First position in the University.  
Teaching experience : 4 years  
Papers Published : 20.  
Editor : (a) Indian Journal of Gerontology  
(b)

2. Shri Udai Chand Jain : 29 years.

B.A. II—56%—1962  
M.A. (Psychology) I, first position, 1969  
Teaching experience : 1 year (as temporary  
lecture in Rajasthan University.)

Sd/—P.L. Bhatnagar.

*Vice-Chancellor.*

## APPENDIX III

(Ref. Syndicate Reso. No. 8 dated 1st Feb., 1971)

Minutes of the meeting of the Selection Committee for the selection of a Professor of Public Administration held on Monday the 25th January, 1971 at 10 A.M. in the Syndicate Hall of the University office.

The following were present :—

- |  |                                   |
|--|-----------------------------------|
| 1. Dr. P.L. Bhatnagar,<br>Vice-Chancellor  | <i>Chairman</i>                   |
| 2. Dr. G.C. Pandey,<br>Prof. and Head of the Deptt.<br>of History and Indian Culture,<br>University of Rajasthan,<br>Jaipur. | <i>Dean, Faculty<br/>of Arts.</i> |
| 3. Shri D.C. Swami,<br>Jaipur.   | <i>Member,<br/>Syndicate.</i>     |
| 4. Dr. B.S. Khanna<br>Head of the Deptt. of<br>Public Administration,<br>Punjab University,<br>Chandigarh.                   | } <i>Experts.</i>                 |
| 5. Prof. R.B. Das.<br>Public Administration,<br>Department, University,<br>Lucknow.  |                                   |
| 6. Prof. A. Avasthi.<br>Head of the Deptt. of<br>Public Administration &<br>Political Science, Sagar<br>University, Sagar.   |                                   |

The following seven candidates were called for interview :—

1. Dr. Atma Ram Tyagi, Mussoorie
2. Dr. C.P. Bhambri, Jaipur
3. Dr. Prabhu Dutt Sharma, Jaipur
4. Dr. Satya Deva, Chandigarh
5. Dr. Sri Ram Maheshwari, New Delhi

6. Dr. Vraj Mohan Sinha, Jaipur

7. Dr. B.P. Gupta, Pilani.

All of them appeared before the Selection Committee.

The bio-data of Shri Zia-uddin was considered and then he was interviewed by the Selection Committee. The Selection Committee unanimously recommended that Shri Zia-uddin be appointed professor of Public Administration.

Sd/—P.L. Bhatnagar.

*Vice Chancellor.*

## APPENDIX IV

(Ref. :-Syndicate Res. No. 8 dated 1st. Feb. 1971)

Minutes of the meeting of the Selection Committee for the selection of Lecturer in Public Administration held on Monday, the 25th January, 1971 at 3 P.M. in the Syndicate Hall of the University Office.

The following were present :—

- |   |                                   |
|---|-----------------------------------|
| Dr. P.L. Bhatnagar,<br>Vice-Chancellor.   | <i>Chairman</i>                   |
| 2. Dr. G.C. Pandey,<br>Prof. and Head of the<br>Deptt. of History and<br>Indian Culture, Uni-<br>versity of Rajasthan,<br>Jaipur. | <i>Dean, Faculty<br/>of Arts.</i> |
| 3. Shri D. C. Swami<br>Jaipur.  | <i>Member Syndi-<br/>cate</i>     |
| 4. Shri Ziauddin Khan,<br>Head of the Department<br>of Public Administration,<br>University of Rajasthan,<br>Jaipur.              | <i>Head of the<br/>Department</i> |
| 5. Dr. V. S. Murty,<br>Head of the Dhptt. of<br>Public Administration,<br>Nagpur University,<br>Nagpur.                           | } <i>Experts</i>                  |
| 6. Prof. V. Jagannadham.<br>Indian Institute of<br>Public Administration,<br>New Delhi.   |                                   |

Out of the Seven candidates called for interview, the following four appeared before the Selection Committee.

1. Shri Daya Singh Chowdhary, Jaipur
2. Shri Girdhar Behari Sharma. Jaipur

3. Shri Madhusudan Gupta, Jaipur

4. Shri Nawal Singh, Jaipur

The Committee recommends that none is found suitable for the permanent post of Lecturer with speciality in Local Administration.

Sd/P. L. Bhatnagar  
*Vice-Chancellor.*



## APPENDIX V

(Ref :—*Syndicate Res. No. 8 dated 1st Feb. 1971*)

Minutes of the meeting of the Selection Committee for the selection of a Professor of Business Administration held on Thursday, the 28th January, 1971 at 10 A.M. in the Syndicate Hall of the University Office.

The following were present :—

- |   |                                      |
|---|--------------------------------------|
| Dr. P.L. Bhatnagar,<br>Vice-Chancellor.   | <i>Chairman</i>                      |
| 2. Dr. Cm Prakash,<br>Director, University<br>School of Commerce, Jaipur.   | <i>Dean, Faculty<br/>of Commerce</i> |
| 3. Dr. K.C. Khanna,<br>Simla.   | <i>Member, Syndi-<br/>cate</i>       |
| 4. Prof. A. Das Gupta,<br>Head of the Deptt. of<br>Business Management,<br>Delhi School of Economics,<br>Delhi University, Delhi. | } <i>Experts</i>                     |
| 5. Prof. Q.H. Farooquee,<br>Prof. and Head, Faculty<br>of Commerce, Aligarh<br>Muslim University,<br>Aligarh.                     |                                      |

N.B.—The third expert Prof. V. S. Murty, Business Management Department, Bombay University, Bombay who had conveyed his acceptance could not attend the meeting.

Out of the four candidates who were called for interview, the following two appeared before the Selection Committee :—

1. Shri Mrityunjay Banerjee, Howrah
2. Dr. Ram Gopal Sarien, Jaipur

The Committee also considered the candidature of following candidates, in absentia :—

1. Dr. Raghberi Saran Nigam, New Delhi (at present in U.S.A.)

2. Dr. Dool Singh, Pilani.

- (a) Dr. Ram Gopal Sarien is recommended for the post of Professor of Business Administration on probation for one year.
- (b) During the period of probation his work and performance be reviewed before considering him for confirmation.

Sd/-P.L. Bhatnagar  
*Vice-Chancellor.*

## APPENDIX VI

(Ref :-Syndicate Res. No. 8 dated 1st Feb. 1971)

Minutes of the meeting of the Selection Committee for the selection of a Reader in Botany held on Thursday the 28th January, 1971 at 1.30 P.M. in the Syndicate Hall of the University Office.

The following were present :—

- |   |                                      |
|---|--------------------------------------|
| Dr. P.L. Bhatnagar,<br>Vice-Chancellor  | <i>Chairman.</i>                     |
| 2. Dr. P.N. Mathur,<br>Principal,<br>Government College,<br>Ajmer.  | <i>Dean, Faculty<br/>of Science.</i> |
| 3. Dr. G. Narayanan,<br>S.M.S. Medical College,<br>Jaipur.  | <i>Member, Syndi-<br/>cate.</i>      |
| 4. Dr. B. Tiagi,<br>Professor and Head of the<br>Department of Botany,<br>University of Rajasthan,<br>Jaipur. | <i>Head of the<br/>Department.</i>   |
| 5. Prof. Reayat Khan,<br>Botany Department,<br>Aligarh Muslim U'sity,<br>Aligarh.                             | } <i>Experts</i>                     |
| 6. Prof. S.C. Maheshwari,<br>Botany Department,<br>Delhi University,<br>Delhi.                                |                                      |

Out of the fourteen candidates called for interview, the following eleven appeared before the Selection Committee :—

1. Dr.(Mrs.) Ambuja Pillai, Jaipur
2. Dr. B.D. Sharma, Jodhpur
3. Dr. Ganga Singh Nathawat, Jaipur
4. Dr. Ganesh Shanker Paliwal, Delhi

5. Dr. H.S. Narayan, Jaipur
6. Dr. Madhawa Nand Tiwari, Jodhpur
7. Dr. P.D. Sharma, Jaipur
8. Dr. (Miss) Pushpa Khanna, Jaipur
9. Dr. Sudhakar Mishra, Jaipur
10. Dr. T.K. Satyanarayan Singh, Muzaffarpur
11. Dr. Uma Kant, Jaipur

The Committee recommended that none is suitable for the post.

Sd./-P.L. Bhatnagar  
*Vice Chancellor*

## APPENDIX VII

(Ref :-Syndicate Res. No. 9 dated 1st Feb., 1971)

Minutes of the Selection Committee meeting for the selection of a Professor and Director, University Institute of Correspondence Studies held on Wednesday, the 27th January, 1971 at 10 A. M. in the Syndicate Hall of the University Office.

The following were present :—

- |  |                                      |
|--|--------------------------------------|
| Dr. P.L. Bhatnagar,<br>Vice Chancellor   | <i>Chairman</i>                      |
| 2. Dr. Om Prakash,<br>Director, University<br>School of Commerce,<br>Jaipur.                                 | <i>Dean, Faculty<br/>of Commerce</i> |
| 3. Dr. G.C. Pande,<br>prof. and Head of the<br>Deptt. of History & I.C.,<br>University of Rajasthan, Jaipur. | <i>Member, Syndi-<br/>cate</i>       |
| 4. Prof. P.C. Jain,<br>Head of the Deptt. of<br>Economics, University of<br>Allahabad, Allahabad.            | } <i>Experts</i>                     |
| 5. Prof. D.N. Elhance,<br>Head of the Deptt. of<br>Commerce, Jodhpur<br>University, Jodhpur.                 |                                      |

N.B.—The third expert, Prof. A. Das Gupta, Head of the Deptt. of Business Management, Delhi School of Economics, Delhi University, Delhi who had conveyed his acceptance to come could not attend the meeting because the flight from Delhi to Jaipur had been cancelled to-day on account of bad weather.

Out of the nine candidates called for interview, the following six appeared before the Selection Committee :

1. Dr. Baij Nath Gupta, New Delhi
2. Dr. H.C. Sharma, Jaipur
3. Dr. L.S. Porwal, Delhi

4. Dr. M.L. Mishra, Jaipur
5. Dr. Raj Narayan Singh, Jaipur
6. Dr. Ram Gopal Sarien, Jaipur

The following is recommended for appointment as Professor and Director of Correspondence Studies :

Dr. L.S. Porwal

Age 44 years.

B. Com 1948 II 59%

M. Com. 1950 I (First Position) 74%

Ph.D. 1966

Teaching Experience : 20 years

No. of papers published : 22

Sd./-P.L. Bhatnagar

*Vice-Chancellor*

## APPENDIX IX

(Ref. Syndicate Res. No. 20 dated 1st Feb., 1971)

Minutes of the Meeting of the University Sports Board held on 6th August, 1970 at 11.00 A.M.

## Present

1. Shri D.C. Swami (Chairman)
2. Shri R.M. Bhandari.
3. Prof. P.S. Sundaram.
4. Mrs. Rama Kochar.
5. Maj. L.R. Soni (Secretary)

## MINUTES

I. To confirm the minutes of the meeting of the Sports Board held on 3rd May, 1970.

*Resolved* to confirm the minutes.

## II. To Consider :—

- A. The report of the Sub-committee appointed to recommend the pannel for Managers/Observers. (Appendix 'A'.)

*Resolved* : that the report be confirmed.

- B. The report of the Committee appointed by the Board to investigate the complaint against Maharani's College, Jaipur, lodged by the President, Inter-Collegiate Women's Tournament. (Appendix 'B')

(i) *Resolved* that the Basketball team of Maharani's College Jaipur be scratched for the year 1969-70 and is disqualified for participation in Inter-Collegiate Tournament for the session 1970-71.

(ii) *Resolved* that the following Basketball players of Maharani's College be debarred from participating in the selection trails for the session 1970-71:— (Appendix 'C')

1. Joyee Ram      2. Urmila Khatri
3. Usha Kumari   4. Meera Rathore
5. Harpreet Kaur   6. Chandra Lekha
7. Kumud Daga     8. Ratan Patel
9. Murdhar Rathore 10. Asha Agrawal.

(iii) *Resolved* that a letter be sent to Miss K.B. Shah by the Secretary, conveying the the displeasure of the Board for using un-parliamentary language in the meeting of the tournament committee at Bikaner.

(iv) *Resolved* that a letter convening the displeasure of the Board be also sent to the Principal, M.S. College for Woman, Bikaner.

C. The rules regarding the Introduction of Sports Men/Women Welfare/Benefit, fund.

*Resolved* that the rules be framed by the Secretary and the same be got approved by circulation.

D. That the tournaments in major games be conducted on league-cum-knock out system.

*Resolved* that efforts be made to organise tournaments on league-cum-knock out basis in Basketball, Football, Volleyball and Hockey.

E. The letter of Director of Maharani's College, Jaipur, Principal, Ch.B.R.G. Govt. Girls College, Sri-Ganganagar and M.S. College for Women, Bikaner regarding the organisation of Women's Tournaments. (Appendix D)

*Resolved* that University be requested to convene a meeting of the Principals of Girls College to frame rules regarding the allotment of Women Tournament by rotation. Further resolved that the Women's Tournament be allotted Banasthali Vidyapeeth this year.



- F. The secretary be empowered to adopt the change in rules of eligibility and individual games and Sports, whenever any change is made by the Inter-University Sports Boards.

*Resolved* that the suggestion be accepted.

- G. That some seats should be reserved in each faculty and College of the University for the admission of out standing Sports men/women.

*Resolved:* (i) that players who have represented the State or the University be admitted irrespective of the marks secured by them at the qualifying examination.

(ii) Players who have represented their College/School/Zonal district/Tournaments be given a benefit of 5 marks.

- H. The report of the Observer and the Organising Secretary, Inter-Collegiate Kabaddi Tournament organised by Govt. College, Pratapgarh.

*Resolved* that the matter be deferred and mean while the reports be referred to a sub-committee consisting of the following persons :

1. Dr. M.G. Bhatwadekar (Convener)
2. Shri J.P. Bagarhatta.
3. Maj. L.R. Soni.

- I. The rules for nomination/election of two students representatives on the University Sports Board.

*Resolved* that the matter be referred to the Committee formed under item 3 (H). The report of Committee be got approved by circulation.

- J. The request of the University Physical Education teachers for admission in condensed courses at Patiala.

*Resolved* that the University be requested to provide funds for sending Physical Education teachers for condensed course in various games and sports.

The meeting ended with a vote of thanks to the chair.

Sd/-

*Chairman.*

Sd/-Lekh Raj Soni

*Secretary.*

## APPENDIX 'A'

LIST OF THE NAMES RECEIVED FOR INCLUSION IN THE  
NEW PANEL OF MANAGERS/OBSERVERS.

S.N.	Name with Designation	Manager	Manager & Observer	Observer.
1	2	3	4	5
1.	Miss Sudha Sharma, PTL., Savtri Girls College, Ajmer.	Basketball Hockey	—	—
2.	Shri Durga Lal, PTL., Govt. Collage, Bundi	Football	—	—
3.	Shri P.N. Arora, D.P.E. Jain (P.G.) College, Bikaner.	Gymnastics Kabaddi	—	—
4.	Shri Radhey Lal Bhargava, PTL., Govt. College, Kishangarh	—	Athletic	Hockey
5.	Shri Gajendra Kumar Tripathi, S.P. Medical College, Bikaner	—	Gymnastics	—

6.	Shri Hari Krishan Kaushik, P.T.I., Engg. College, Jaipur.	—	—	Kabddi
7.	Shri Vikarm Singh Rathore, P.T.I., G.R. College, Fatehpur.	Basketball	—	—
8.	Shri S.M. Chaudhary, Lecturer, Govt. College, Sriganaganagar.	Volleyball	Shooting	—
9.	Shri N.S. Rajawat, Lecturer, Shri Kalyan College, Sikar	—	Basketball	—
10.	Sri Ram Saran Sharma, P.T.I., Govt. College, Kotputli.	—	Hockey	—
11.	Shri Iqbal Singh, DPE, Khalsa College, Sriganaganagar,	Athletics, Badminton.	—	—
12.	Md. Ieyas Khan, P.T.I., Medical College, Udaipur.	Volleyball Cricket	—	—
13.	Miss Sajjan Panwar, P.T.I., J.D.B. Girls College, Kota	Basketball Hockey, Bad- minton.	—	—
14.	Shri B.K. Ojha, Univ. Coach, Univ. Sports Board, Jaipur.	—	Volleyball	—
15.	Shri J. Mukerjee, DPE., Univ. Main Campus, Jaipur,	—	Badminton, Hockey, Football, Football women's Athletics.	Volleball Tennis

1	2	3	4	5
16.	Sri Krishan Agarwal, P.T.I., Govt. College, Beawer.	—	Wrestling, Wt. Lifting	—
17.	Shri Harsharan Singh, D.P.E., Commerce College, Jaipur.	—	Athletic, Football	—
18.	Shri M.L. Oswal, Lecturer, Commerce College, Jaipur.	Chess	—	—
19.	Shri Amar Nath Trahan, Lecturer, Seth Moti Lal College, Jhunjhnu.	—	Volleyball, Basketball	—
20.	Shri Surendra Lal Bhargava, Lecturer, Govt. College, Bhilwara.	Basketball	—	—
21.	Shri Yogeshwar Sharma, Lecturer, Govt. College, Kota.	Chess	—	—
22.	Mrs. Krishana Soni, Lecturer, Govt. Girls College, Sri Ganganagar.	Badminton, Kho-Kho, Basketball	—	—
23.	Shri Satpal Soni, P.T.I., Govt. College, Ajmer.	—	Gymnastic, Wt. Lifting.	—

24.	Shri O.P. Bhargava, Lecturer, Govt. College, Ajmer.	—	Tennis	—
25.	Shri N.P. David, Lecturer, Govt. College, Ajmer.	—	Cricket	—
26.	Shri B.K. Bhargava, Lecturer, Govt. College, Ajmer.	—	Table Tennis	—
27.	Shri A. N. Parashar, Lecturer, Govt. College, Ajmer.	—	Table Tennis Cricket, Shooting.	—
28.	Shri Prakash Narain Sharma, Lecturer, Univ. Studies in Arts, Jaipur.	—	Basketball	—
29.	Shri P. S. Yadava, A. D.P.E., Univ. Studies in Arts, Rajasthan College, Jaipur.	—	Football, Kabaddi	—
30.	Shri Shoo Karan Chhangani, P. T. I., M.S. College, Bikaner	—	Kabaddi, Kho-Kho.	—
31.	Shri Ravindra Nath Tikku, Head of the Pol.Sc. Deptt., Rampuria College, Bikaner.	—	Chess	—
32.	Shri Q. L. Chandda, P.T. I., Lohia College, Churu.	—	Volleyball	—

1	2	3	4	5
33.	Shri Tara Chand Jain, P.T.I., Govt. Girls College, Sri Ganganagar.	Kho-Kho	—	—
34.	Shri P. N. Mathur, Govt. College, Shahpura.	Football	—	—
35.	Shri Madan Mohan Gupta, Lecturer, R.R. College, Alwar.	—	Shooting	—
36.	Shri K.S. Bhatti, P.T.I., Govt. College, Barmer.	—	Basketball, Volleyball	—
Considered without Applications.				
37.	Mrs. Rajeshwari Swami, Univ. Teaching Deptt, Jaipur.	Kho-Kho	—	—
38.	Miss. K. Shah, A.D.P.E., Maharani's College, Jaipur.	Athletic, Volleyball	—	—
39.	Mrs. Kamlesh Mehta, Maharani's College, Jaipur.	Athletics, Volleyball.	—	—
40.	Shri P.S. Kachawa, A.D.P.E., Maharaja's College, Jaipur.	—	Athletics, Football.	—

41.	Shri P.C. Bakshi, A.D.P.E., Maharaja's College, Jaipur.	—	Wrestling, Kabaddi, Athletics.	—
42.	Shri Bhagwan Singh, P.T.I., Govt. College Ajmer.	—	Basketball	—
43.	Shri Yogendra Bhargava, Govt. College, Bhilwara.	—	Basketball	—
44.	Shri S.N. Bhaya, P.T.I., R.R. College, Alwar.	—	Hockey, Athletics.	—
45.	Shri Som Nath Singh, Lect. M.S.J. College, Bharatpur.	—	Hockey, Athletics.	—
46.	Shri R.K. Sangwan, Swimming Coach, Univ. Main Campus, Jaipur.	—	Swimming	—
47.	Shri D.P. Bhargava, D.P.E., Rajasthan College, Jaipur.	—	Hockey, Women's Tournament, Tennis.	—
48.	Shri J.P. Bagarhatta, P.T.I., S.M.S. Medical College, Jaipur.	—	Hockey, Cricket, Volleyball	Women's
49.	L.R. Soni, D.P.E., Maharaja's College Jaipur.	—	Athletic, Volley- ball, Table Tennis	Women's



1	2	3	4	5
50.	Shri Ziallahkhan, P.T.I., Govt. College, Dungarpur.	Basketball, Kabaddi, Wrestling.	—	—
51.	Shri M.D. Sharma, D.P.E., Dungar College, Bikaner.	—	Volleyball, Wrestling, Gymnastics, Best Physique.	Women's
52.	Shri S.A.N. Naqvi, P.T.I., Govt. College, Tonk.	Football	—	—
53	Shri Badrinarain Sharma, R.R. College, Alwar.	Basketball	—	—
54. ;	Shri B.M. Diwakar, Govt. College, Bhilwara.	—	Basketball	—
55.	Shri Naresh Kumar Mathur, P.T.I., Subodh College, Jaipur.	Hockey, Football, Athletics.	—	—
56.	Dr. L.S. Kothari, Lecturer, Maharaja's College, Jaipur.	—	Badminton, Table Tennis.	—

57.	Shri T.N. Bhatnagar, Lecturer, Maharaja's College, Jaipur	—	Cricket	—
58.	Dr. K.M. Mathur, Lecturer, Maharaja's College, Jaipur.	—	Tennis, Badminton, Table Tennis.	—
59.	Shri B.M. Agarwal, Lecturer, Commerce College, Jaipur.	—	Tennis, Table- Tennis	—
60.	Shri N.S. Dhatta, Coach, Sports Board, Jaipur.	—	Basketball	—
61.	Shri K.N. Kakkar, Lecturer, S.S.G. Pareek College, Jaipur.	—	Tennis	—
62.	Shri Balbir Singh, Regional College of Edu., Ajmer.	Athletics, Gymnastic.	—	—
63.	Shri Rama Krishna, Regional College of Education, Ajmer.	—	Basketball, Athletic	—
64.	Shri Ratan Singh, P.T.I., Govt. College, Kota.	—	Hockey, Football.	—
65.	Mrs. Rama Kochar, Principal Govt. Girls College, Sri Ganganagar.	—	—	Women's

1	2	3	4	4
66.	Shri J.S. Hiran, P.T.I., Govt. College, Chittorgarh.	—	Football	—
67.	Shri S.D. Agnihotri, P.T.I., DAV College, Ajmer.	—	Swimming, Athletics.	—
68.	Mrs. S. Suparariwala, P.T.I., Sophia College, Ajmer.	—	Hockey	—
69.	Shri Badri Narain Sharma, R.R. College, Alwar.	—	Basketball	—
<p style="text-align: right;">Sd/-Lekh Raj Soni Secretary, Univ. Sports Board.</p>				

A MEETING OF THE COMMITTEE CONSISTING  
OF THE FOLLOWING MEMBERS APPOINTED  
BY THE SPORTS BOARD, RAJASTHAN  
UNIVERSITY AND APPROVED BY  
THE SYNDICATE WAS HELD ON  
26-7-90 IT WAS ENTRUSTED  
TO REPORT ITS FINDING ON  
THE COMPLAINTS MADE  
BY MRS., BHANDARI,  
PRINCIPAL, M.S.  
COLLEGE FOR  
WOMEN,  
BIKANER.

present

- |                         |                 |
|-------------------------|-----------------|
| 1. Shri Ziauddin Khan   | <i>Convener</i> |
| 2. Maj. L.R. Soni       | <i>Member</i>   |
| 3. Shri J.P. Bagarhatta | <i>Member</i>   |

The committee read the complaint, the observers reports and other replies from the persons to whom the complaint was referred.

The committee has come to the following findings :—

1. Bad arrangements and organisations under the direct supervision of Mrs. Bhandari, Principal of M.S. College and the president of the tournament and Mrs. Bhardawaj, Organising Secretary seem to be the cause of the tournament troubles.
2. This was the sufficient provocation of any team-in-charge and was responsible for the tenditions atmosphere prevailing during the tournament.
3. University Observers reports must be regarded as most authentic and they have supported the above two points of the bad management and tenditions atmosphere.
4. Though under provocation it is established that Miss. K. Shah used unparliamentary language. This is supported by both the University Observers.
5. With regard to the breakage of canteen crockeries it could not be established that the crockeries were broken by the Maharani's College team girls. The breckage of the crockery could not be traced by

Shri Som Nathji, the University Observer. It may be the result of bad arrangement on the part of the Canteen Manager.

6. It is established that the Basketball individual prizes won by the Maharani's College girls were broken by them before the whole gathering. It is supported by Shri Somnathji. Both the teachers-in-charge Mrs. Sondhi and Miss. Shah have not made a mentain about it in their replies. Mrs. Rama Kochar, University Observer, was absent then.

This is the most deplorable act on the part of the student sportswomen of Maharani's College.

7. With regard to the charge of drunkenness, it appears to be baseless.

The report was from an irresponsible person without paper proof. It was neither reported to the team-in-charges nor to the University Observers immediately or next morning. It was not properly investigated by the Organising authorities before forwarding the complaint.

It is too serious a charge to be made without substantial evidence,

Sd/-Ziauddin Khan.

*Convener.*

## APPENDIX B

Copy of the letter No. 2280 dated 23-10-69 from the Principal, M.S. College for Women, Bikaner to the Vice-Chancellor, and copy to the Secretary, University Sports Board, Jaipur.

I am to inform you that on 10th Oct. 69, the Kho-Kho final match was played in this College, between the team of M.S. College for women, Bikaner and Maharani's College, Jaipur. I was present on the ground and watching the match.

The players of Maharani's College, Jaipur, began to play a very rough game a few minutes before the closing of the match inspite of the whistly by the referee they chased the students and pushed them into the spectators standing to watch the match.

At the last moment one of the players from Maharani's College, Jaipur chased a girl of M.S. College, Bikaner. The chaser inspite of the whistly by the referee chased and M.S. College girls slopped away and the chaser could not adjust her balance and thus fell upon the Bikaner player No. 9 who was waiting outside the line for her turn and caught her skirt. The M.S. College girls has thus to bend down and the Maharani's College, Jaipur, student immediately caught her hair, pulled at with full force. The allegation that five students of M.S. College, Bikaner dragged and beat the students of Jaipur College, is quite false and baseless. There was no such incident.

I am also to submit as under for your information and necessary action—

1. The referee of Kho-Kho match informed me in writing that during the play, Jaipur players No. 6 used a derogatory work for him i.e.
2. The referee suggested that examdary punishment should be given to the offending players so that other players may learn a lesson out of it. A letter to this effect was sent to the Incharge team of the College asking to obtain the exaplanation from the player for her misbehaviour. The peon who went to deliver the letter to the Incharge team informed me that she took away the letter and torn it to pieces. She also refused to give a receipt of the letter having been received by her. This was a gross misbehaviour on the part of the in-charge team to have torned the official letter sent to her.
3. A meeting of the Incharge teams and University Observer was held on 12th Oct., 69. Miss Shah, one of the

Incharges from Maharani's College, Jaipur misbehaved and abused me and Mrs. C.J. Bhardwaj, Secretary of tournament. I repeatedly asked her not to use unparliamentary language but it seemed she had lost all control over her senses and continued speaking in same tone. I am sorry to inform you about this indiscipline incident of Miss Shah.

4. The students of Maharani's College, Jaipur were not well disciplined. They threw and broke down the crockery of the contractor as per his report (Copy enclosed.) One more report of the canteen contractor is enclosed which is self-explanatory. I do not like here to describe their behaviour and morals. Not only this they were so uncivilised and polished that they destroyed their individual prizes awarded in Basketball in the presence of the tournament committee on the ground with their sticks. This action was a gross act of indiscipline and misbehaviour. Tournaments are arranged to develop social and fellow feelings among the students but on the contrary such actions develop hatred. I am here to write you that the incharges were mostly responsible for such rude behaviour. Heads were mostly reponsible for such rude behaviour. Had they fired to control and resisted their own instigations, their students could not have couraged to put up the bad show indiscipline.

If such things are continued and are not controlled by the University and the concerned, I am compelled to say that this institution would not participate in the University Tournament henceforth.

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## प्रतिलिपि

प्रिन्सिपल साहब,  
महारानी सुदर्शन कालेज,  
बीकानेर ।

श्रीमान,

सेवा में निवेदन है कि जयपुर से आई छात्राओं ने रात को करीब 1 बजे आकर हमारे नौकरों को जगाया और कहा कि केन्टीन खोलकर हमें नमकीन, सामान चाहिए । छात्राओं को देखने से ऐसा लगता था कि वे नजे में थी इसलिए आपसे प्रार्थना है कि आप इस टीम की ईन्चार्ज को आदेश दे कि इतनी रात अकेली छात्रायें हमारे आदमियों को तंग न करे और केन्टीन बन्द करने के बाद कोई सामान आईन्दा नहीं दिया जावेगा । ऐसी हरकत अगर दुबारा हुई तो कृपया केन्टीन चलाने के लिए मजबूर है ।

प्राथी

रामचन्द्र

पो० आनन्द होटल



प्रिन्सीपल,  
महारानी मुदर्शन कालेज,  
वीकानेर ।

श्रीमान जी,

सेवा में निवेदन है कि आज दिनांक 12-10-69 को दुपहरी चाय के वक्त जयपुर से आई हुई छात्राएँ ने चाय नाशता करते वक्त जान बूझ कर हमारा नुकसान किया जिसकी लिस्ट निचे मुजिव है । कृपया इसका हरजाना दिलवाया जावे वरना मैं कल से जो ठेका लिया हुआ है मैं काम करने के लिए तैयार नहीं हूँ । और न ही खाना बनाऊंगा । मैंने अपनी इज्जत और सामान का नुकसान करवाने के लिए ठेका नहीं लिया है ।

4.20 पैसे प्लेट नग 6

5.25 पैसे कप नग 7

4.50 टी पोट नग 1

4.80 पैसे कांच की गिलास नग 8

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कुल 19.05 पैसे

कृपया इस पर ध्यानपूर्वक गौर फरमाया जाकर मेरी मजबूरियों को मदे ध्यान रखते हुए मेरी मदद करें । टीम की इन्चार्ज है उनको आदेश दें कि वे टीम के साथ रहे ताकि कोई तरह की नुकसान वगैरा से बच सके ।

प्रार्थी,  
रामचन्द्र,  
कैन्टीन इन्चार्ज

Copy of the letter from the Observer, University Inter-College Women's Tournament Mrs. Rama Kochar, Principal, Govt. Girls College, Sri Ganganagar to the Secretary, University Sports Board, Jaipur.

Received your letter No. 580 dated 7-11-69 including the copy of the letter No. 2280 dated 23-10-69 from the Principal, M.S. College, Bikaner, I had gone through this false and baseless complaint of Bikaner which is planned after the tournament is over.

I personally witnessed this final match of Kho-Kho between M.S. College, Bikaner and Maharani's College, Jaipur and even I had to request the spectators to get back, who were entered into the field during the match in almost all the sides of the field. Regarding arrangements I had already informed you in my report.

I myself saw that M.S. College, Bikaner players who were sitting outside for their turn, pulled Maharani's College chases upto dragged hair and beat, resulting that Maharani's College left the field when no action was taken against those players of M.S. College, Bikaner. This incidence occurred when only one minute or so was left to finish the match. This is really a wonder how the Principal, M.S. College tried to hide the facts when she was also witnessing the match. As the President of the tournaments, she should have taken action against the Bikaner players at the spot.

If any demogatory work was done by the players of Maharani College, Jaipur for which I think this was none, then the referee could have expelled that player from the match immediately after issuing the warning. But no such warning was issued to any players of Maharani's College during the course of play.

In the meeting held on 12th Oct., 69, I was present. All the team incharges were making complaint against the organisation of the tournament I agree here, Miss. Shah used some unparliamentary language but Mrs. C.J. Bhardwaj, the Secretary of the Tournaments, also lost her control and behaved very roudly. The circumstances forced Miss Shah to lose her temper. Miss. Shah and other team incharges requested many times to the President and Secretary (of the tournament to remove their difficulties but the organisers tried to satisfy them. Resulting that a meeting of various team incharges was held on 10th Oct, 69 at 9:30 P.M. in the presence of other University observer. Shri Som Nath Singhji made complaint against the organisation of the tournament to you the copy of which you must have received if not I am enclosing herewith.

My Physical Instructor requested the Secretary and even to the president for the lining and watering the Hockey field but nothing was done and even the final match was played without lining and watering. He requested that if it is not possible to give water to whole of the Hockey field than please give water only in the D. Area so that same score may be made, but that too was ignored. Such was the attitude of the organisers. Mess arrangement was also very poor.

Canteen incharge reported that the Jaipur girls seemed to be intoxicated when they had gone to purchase some Namkeen in late hours in the night. This seems to be quite baseless. Such complaint should have been brought to the notice of the observers. I think this all has been drafted after the tournaments.

What happened during the prize distribution. I can't remark as I left Bikaner in the afternoon of 13th Oct. i.e. before the prize distribution.

As such I feel that all responsibility goes on the tournament committee.

*Sd/-Rama Kocher.*

Copy of the letter from the Observer Som Nath Singh, to the Secretary, University Sports Board, Jaipur.

Reference your letter No. 581 dated 7-11-69. As desired comments on letter No. 2280 dated 23-10-69 from the Principal, M.S. College, Bikaner sent by you are as follows :-

1. As I have already written in my report of the tournament in question that the two major colleges did not co-operate the organising college and as such they tried to dominate each other in every sphere. As regards the Kho-Kho final match both the College played very exiting game in the last moments, so it was natural that they happended to collied each other unintentionally. The referee also warned the players to play fair game but they found herself helpless.

It was not in my notice whether the referee gave any thing in writting to the organising Secretary in this connection.

2. In the tournament committee meeting held on 12th Oct., 1969 Miss. Shah team in-charge of Maharani's College, Jaipur seemed very much annoyed and could not control herself and used such a language which ought to have not been used in the official meetings.

3. When I came to know that the students of Maharani's College Jaipur broke down few pieces of crockery, I enquired in this connection from the manager of the cafeteria and was told that some of the crockery as was intentionally broken, though the remaining were not shown to me. As regards the destroying of the individual prizes by the students Maharani's College, Jaipur herself there is no two opinions in this connection. The students intentionally destroyed their individual prizes awarded to them in the presence of all.

*Sd/-Som Nath Singh.*

Copy of the letter No. 5111 dated 9-12-69 from the Director of Maharani's College, Jaipur to the Secretary, University Sports Board, Jaipur.

Sub : 17th Rajasthan University Women's Tournaments held at Bikaner.

Ref : Confidential No. 490 dated 28-12-1969.

It was with the greatest surprise that we received from you the forwarded copy of letter No. 2281 dated 23-10-69 from the Principal, M.S. College, Bikaner, President of the Inter-Collegiate Women's Tournament for women in that I had already heard innumerable complaints about the Organisers from my team.

The charges made are all baseless and fabricated to cover the utter inefficiency, lack of organisation and extreme discourtesy shown about which several complaints had been made by various teams. As a matter of fact the atmosphere on the campus was so uncongenial that it was with the greatest difficulty that our teachers could pacify our girls and persuade them to play.

The allegations made are below notice. We, however, take strong objection to two facts the extremely unsporting behaviour of the Bikaner team who beat up our girls during the Kho-Kho match (it was not an accident as stated) and the reflection on the character and morals of our girls, particularly the charge of drunkenness by the canteen-in-charge. We would like to know why this wild complaint made by an irresponsible person was not brought to the notice of our teachers-in-charge the next day and forwarded (without suitable enquiry) only now, the only explanation is that it was fabricated later on under pressure, to malign our students.

We would request you, very kindly, to get copies of Mrs. Bhandari's letter forwarded to the University Observers for comments and to request an enquiry to be set up as such behaviour vitiates the whole atmosphere, and contrary to the spirit of sportman-ship, encourages pettiness and breeds ill feeling and animosities. If this is the result of the Inter-University College tournaments we would suggest closure of the same.

Sd/-Director,  
*Maharani's College, Jaipur.*

NOTE : I have requested the two incharges, Miss. K. Shah. Asstt. Director of Physical Education and Mrs. Premlata Sondhi, lecturer in Chemistry who had accompanied the team to contact you directly in this connection and explain the whole position.

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I was shocked to note that the Principal, M.S. College, Bikaner in the capacity of the President of the Inter-Collegiate Tournament for Women, should indulge in such type of dirty politics, I assert that the so called facts placed before the Secretary of the Sports Board of the University of Rajasthan, are wholly baseless. False allegations have been fabricated to hide their own short coming and inefficiency in making suitable arrangements for the security of the girls. This appears to have been done to hide facts about which we made representations to her.

I regret to contradict Mrs. Bhandari's statement I was present on the ground and watching the match. She was not present on the field while the final Kho-Kho match was going between Maharani's College, Jaipur and M.S. College, Bikaner on 10th Oct., 69. She came to the Kho-Kho field half an hour before the start of the match while our team was waiting for the match to start, and she left within 2 or 3 minutes time.

I am again sorry to inform you that the allegation that our girls played a really rough game is totally wrong. The fact is that our girls never played roughly, they always heeded to the instructions of the referee and abided by his judgement.

They never pushed the girls into the spectators, if it had been true, it was for the referee to warn the players, but he did not give any such warning. This is a proof in itself that the allegation is wrong.

The incident related in para '3' of the letter is a total distortion of facts. On the contrary our players Pushpamala, whose name has been mentioned, was chasing M.S. College team players. When pushpamala came running close to the end of the field one, I was incidently looking in that direction and heard M.S. College players (four or five in No.) shouting Pakro Maro and then the next moment they dragged Pushpamala and pulled her hair and beat her while it has wrongly been mentioned in the letter that she fell down upon them. Immediately the time keeper whistled to interrupt the match and scolded player No. 9 of M.S. College Bikaner. Mr. Som Nath Singh, University Observer is a witness to this. Mrs. Rama Kochar, Principal Govt. College, Gangaganagar, who was present there in the capacity of University Observer was watching the game, she came and pushed back the spectators who were actually standing on the field. Actually there was no sufficient space for the spectators to sit or stand around the Kho-Kho field.

About 'the derogatory word' said to have been used by player No. 6, upon enquiry I found that this charge was also baseless. As a matter of fact to quote Mr. S.N. Singh, University Observer the S.M. College, the Bikaner player was warned by the referee for misbehaviour. We protested to the Secretary in writing. She apologised several times, and promised to punish player No. 9 and others and further added that they had already scolded her for her indisciplined action. About the tearing of the letter, I would like to state that the paper used was of so rotten a quality the letter was pasted at the back also that it got torn while taking it from Mr. Sondhi's hand. It was not done deliberately and had no intention to insult the authorities.

Again this point was raised in the last meeting while Miss Shah was trying to explain, the Secretary used all sorts of adjectives to insult her. Miss Shah did not refuse to sign but there was no pen to sign as the peon had not brought one. The letter was replied to and a copy is attached here with.

Miss Shah did not misbehave as stated in the meeting. She was only trying to explain her position about the said misbehaviour of player No. 6 and not extorting information about the punishment to their player No. 9 and others.

Incharges of different teams were complaining about the mismanagement of the organisers, their inefficiency, bad conditions of the field especially the hockey field, the basketball board and the ring. The University Observer Mrs. R. Kochar supported those who complained and spoke-out very strongly against the above mentioned short-comings. This enraged the President and Miss. Shah, who was still standing and placing facts before the members, was made the scape goat. The President and the Secretary both shouted at her but even then she remained calm and quiet. Mrs. Bhandari suddenly rose to leave the meeting and was on the verge of weeping, her voice was choked just then Mrs. R. Kochar hurriedly proposed to thank her and the meeting ended. Far from using unparliamentary language Miss Shah did not use strong words. This can be verified from the incharges of the various teams and the University Observers.

In reply to point No. 3 no crockery was broken by our girls. This was proved beyond doubt to the mess incharge Mrs. Tripathi and the contractor concerned. They were fully satisfied with the proofs supplied to them. This was also explained in the last meeting by me to the President, when this point was raised.



We very strongly present and take a very serious view of the charge on our girls moral character, and request the Vice-Chancellor to take action in this matter against Mr. Bhandari who has levelled such filthy, baseless and fabricated charges against the moral character of our girls.

Our girls never moved out of the room after 10'O clock whatever was required was got through our own peon, so there was no question of our girls going to the Canteen for Namkeen and walking up the Canteen Walah under the 'influence of liquor,' as mentioned in the letter attached. This is highly deplorable.

I would request you to hold an enquiry in this matter to find out the truth. I would like to know why if all the above said complaints were made by the contractor in writing. The letters were not shown to us and the point of moral character raised in the last meeting of 12th Oct., 69.

Thanking you.

Sd/-B.L. Sondhi

मेरे विरुद्ध जो आक्षेप लगाये गये हैं उनके बारे में मुझे निम्न बातें कहनी हैं ।

1. जो शिकायत खो-खो मैच के मैदान के बारे में कही गई है, गलत है, झूठ है और अपने आपकी कमजोरियों को बचाने के लिए की गई है जब यह मैच खेला जा रहा था उस समय दोनों यूनिवर्सिटी ओवजरर्वर्स वहां उपस्थित थे । उनसे पूछ लिया जाय । मुझे अफसोस है कि टूर्नामेंट की अव्यक्षा ने अपनी गलती हम पर थोप दी है । सत्य यह है कि वीकानेर की खो-खो की छात्रायें जो वहां अपनी बारी की प्रतीक्षा में बैठी थी उन्होंने महारानी कालेज की खेल में दोड़ रही छात्रा को खेल के मैदान से खींच कर पीटा । खेल समाप्त होने में जब कुल एक मिनट ज़ेप था उस समय सिटी बजी, भीड़ उत्तेजित हो गई, खेल नहीं हो पाया । वीकानेर की लड़कियों ने ऐसा किया जिसके कारण खेल बन्द करना पड़ा उसमें हमारा दोष नहीं है । जो कुछ हमारे विरुद्ध कहा गया है, मेरा ऐसा ख्याल है कि शायद अव्यक्षा जी ने उनकी लड़की को गलती महारानी कालेज की लड़की समझ कर रिपोर्ट की है । मैं प्रार्थना करती हूँ कि उन्हें कहा जाये कि वे याद करें कि वह लड़की उनकी थी या हमारी ।

2. दूसरी बात मुझे यह कहना है कि नं. 6 खिलाड़ी ने कोई भी ऐसा काम नहीं किया । अगर किया था तो रेफरी साहब ने क्यों नहीं यूनिवर्सिटी के ओवजरर्वर्स का ध्यान उसी समय अवग वही आकर्षित किया और क्यों नहीं उसी समय उसके विरुद्ध कार्यवाही की गई, क्यों नहीं उस खिलाड़ी को वार्निंग दी गई । यह वाद में खयाल आया है क्योंकि हमारे विरुद्ध उन्हें रिपोर्ट बनानी थी ।

3. तीसरी बात मेरे व्यवहार के विरुद्ध है, मैंने अनपार्लियामेंट्री भाषा का कोई प्रयोग नहीं किया । सभी इंचार्ज वहां मौजूद थे । मेरी लड़कियों की इज्जत खतरे में थी और अनेक बार कहने पर भी ध्यान नहीं दिया गया था । उसके लिए मिटिंग में फिर भी हम लोगों पर झूठा इल्जाम लगाया गया उसके लिए अपनी सफाई देते वक्त जो मैंने बोला वह अनपार्लियामेंट्री भाषा का कोई प्रयोग नहीं था । सभी इन्चार्ज खेल के मैदान से संतुष्ट नहीं थे और अपनी शिकायतें पेश कर रहे थे तब अव्यक्षा महोदया ने जो अपनी असमर्थता खेल के कोर्ट के बारे में बताई, उसमें यूनिवर्सिटी ओवजरर्वर श्रीमता रमा कोचर ने टिप्पणी की थी कि आपके पास जो कोर्ट है उसी को ठीक से बनवाकर सबको तसल्ली आप दे सकती । थी जैसे ही उन्होंने यह कहा अव्यक्षा के आंखों में आसू आगए और भराई गले की आवाज से, मैं जा रही हूँ कहके

अपनी कुर्सी से उठ गई। यूनिवर्सिटी ओवर्जरवर की हैसियत से तब उन्हें बैठा कर, मना कर श्रीमती कोचर न उनको सब बाहर से आयी टीमों की ओर से ग्रन्थवाद दिया उसके बाद भी उन्होंने मुझे दोपी ठहराया, तब मैंने अपनी सफाई देने के लिए चन्द गद्द बोले ही थे कि मुझे बुरी तरह बोल कर चुप रहने को कहा गया। मैंने फिर भी अपनी सफाई देने की चेष्टा की उसी को कुछ भी कह सके है। मैंने इतनी बड़ी सीट पर बैठे लोगों की गाली कभी नहीं दी यह सरासर भूठ है मैं कभी ऐसा काम कर ही नहीं कर सकती। मैं ऐसी व्यक्ति हूँ ही नहीं। अध्यक्ष ने स्वयं अपने व्यवहार से सारे वातावरण को तनाव और खिचाव पूर्ण बना दिया। जो कुछ उन्होंने कहा बाकी ईंचार्ज और मौजूद लोगों से पूछा जा सकता है। सच पूछिये तो श्रीमती भारद्वाज ने बहुत भद्दी भाषा का प्रयोग मुझ से किया उसके उत्तर में भी मैंने कोई अनपार्लियामेन्ट्री भाषा नहीं बोली। मुझे बोलने का मौका ही कहाँ दिया गया। मीटिंग खत्म हो गई और सब उठे और बाहर आ गये।

4. चौथी बात जो छात्राओं के व्यवहार के लिए कही गई है क्रोकरी टूटने की है वह कुछ हद तक सच है। पर हमारी लड़कियाँ ने नहीं तोड़ी। मैंने मुना था कुछ क्रोकरी जो टूटी वह तोड़ी नहीं गई और वह भी दूसरी टीमों से हुआ है। एक घन्टे इन्तजार करने पर जब नाश्ता नहीं आया तब उन टीमों की शांति भंग हो चुकी थी। ठेकेदार का व्यवहार बहुत भद्दा था जब माँगने पर भी चाय नहीं मिली तब लड़कियाँ गुस्से में उठकर जाने लगी तो एक दूसरे की टक्कर लगने से कुछ प्लेटें व कप टूट गये थे, यह सुनने में जरूर आया था।

रही नशे की बात वह कितनी गलत व अशोभनीय है। जर्म की सीमा निकल चुकी है। यह बात बनाई गई है, बिल्कुल गलत है, निराधार और भूठ है। अगर ऐसा था तो क्यों उसी समय ट्रामिंट कमिटी की मीटिंग में छात्राओं के विरुद्ध अनुशासनात्मक कार्यवाही नहीं की गई। मुझे अत्यन्त ही अफसोस है कि ऊँचे पद पर बैठ कर इतने निम्न स्तर की बात जो छात्राओं के जीवन और चरित्र को प्रभावित करती है भूठे इल्जाम लगाकर दोषारोपण कर सकते हैं उनके लिए क्या कहा जाय। मेरा यह अनुरोध है कि अगर छात्राओं ने अनुशासन भंग किया हो तो उनको दण्ड दिया जावे और नहीं तो निरपराध छात्राओं के चरित्र पर भूठा आरोप लगाने वाले पर दोषी पाये जाने पर सख्त से सख्त कदम लिया जाये ताकि भविष्य में निर्दोष के ऊपर कोई जुल्म न ढाह सके। अपनी तरफ से मुझे इतना ही कहना है कि वास्कोट वाल के मैच में क्या-क्या गड़बड़ हुई थी वह यूनिवर्सिटी ओवर्जरवर से

पूछा जाये। खेल के मैदान के द्वारे में जो भी तकलीफ़ औरों ने बताई, उसे मजाक में उड़ाया गया।

तकलीफ़ बताते हैं तो उल्टा सोचते हैं। मैं छोटी है बड़ी बात कहना नहीं चाहती पर इतना कहती हूँ कि वहाँ पर गैर जुम्मेदारी का राज्य था। हम 8-10 इंचार्ज ने मिलकर अपनी तकलीफ़ बता के उनका ध्यान दिलाने के लिए सोचा था पर हमने स्थिति बिगड़ने की बात सोचकर भले मानुष बनकर उनसे कुछ नहीं कहा फिर भी दोषी होकर भी उल्टा दोष हमारे ऊपर और वह भी झूठमुठ का लगाया। इतना जरूर है अगर वे आर्गनाईजिंग ढंग से नहीं कर सकती थी तो उनको टूर्नामेंट चलाने की जिम्मेदारी नहीं लेनी चाहिये थी।

सुरक्षा की दृष्टि से वहाँ रहना 24 घंटे खतरे से खाली नहीं था, कोई इन्तजाम नहीं था। लड़के आते जाते सीधे कमरे में घुसते, गुसलखाने में छुपते। मैं ज्यादा क्या लिखूँ लिखना ठीक नहीं लगता।

न्याय की दृष्टि से शून्य मामला था। स्पोर्ट्स बोर्ड और स्पोर्ट्स काउंसिल के अफसर, रेफरीज व सब-इन्चार्ज से लिख कर पूछा जाय कि कितने मैच हुए और उनमें से कितनों में उन लोगों को रेफर करने का मौका मिला, उन लोगों ने जानबूझ कर अपने रेफरी से शिकायत पत्र लिखवाया होगा नहीं तो औरों ने तो कुछ भी शिकायत नहीं की मौखिक सभी बातें टूर्नामेंट सैक्रेटरी को बता दी थी, यह हमारी शराफत है, उनकी शराफत यह है कि झूठी बातें बनाकर हमारे विरुद्ध आरोप लगाया। मैंने सब सच बातें आपके सामने पेश की है। आगे न्याय आपके हाथ में है।

एस०डी०-कुसुमविक्रम शाह।

## APPENDIX C

MAHARANI'S COLLEGE BASKETBALL TEAM  
1969-70.

1. Joye Ram.
2. Urmila Khatu.
3. Usha Kumari.
4. Meera Rathore.
5. Harpreet Kaur.
6. Chandra Lekha.
7. Kumud Daga.
8. Ratan Patel.
9. Murdhar Rathore.
10. Asha Agrawal.

**Lekhraj Soni**  
*Secretary,*  
University Sports Board.

## APPENDIX 'D'

Copy of the letter No. MSC/Estt/1263/70 dated 25th July, from the Principal, M.S. College, for Women, Bikaner to the Secretary, University Sports Board, Jaipur.

With reference to your letter No.USB/70-71/1906 dated 13.7.70. I am to inform you that this college organised the University Tournaments last year and as such we are quite unable to organise the Tournaments this year.

In this connection I would like to draw your kind attention to this office letter No.MSC/Games/1802/69 dated 11.8.69 under which I suggested you that all the participating colleges including private colleges should be asked to arrange tournaments in their colleges by rotation, and they should have no right to refuse it. In case they do not abide by the rules some action was requested to be taken. I, therefore, request you to kindly intimate if any action towards this end was taken by you. I feel untill and unless some such rules are framed the institutions will go on refusing to organise the tournaments in their colleges.

Sd/-principal

M. S. College for Women,  
Bikaner.

Copy of the letter No. 2002 dated 20th July, 70 from the Director, Maharani's College, Jaipur to the Secretary, Sports Board, Jaipur.

I regret I shall not be able to wield the responsibility of organising the University Women's Tournament for the session 1970-71 for the following reasons :—

1. The surcharged atmosphere of general indiscipline and the prevailing deteriorating discipline position amongst the student community at large.
2. The location of Maharani's College and the very incident of the beating up of our clerk Shri Kartar Singh L.D.C. in board day light during office hours by student rowdies. Beating up of teachers has also taken place in recent year.
3. In built difficulties of organising a tournament in the present set up of University administration and teaching arrangement makes availability of teachers for such organisation and work difficult.
4. Meagre allotment of funds from the Sports Board for organising such tournaments.
5. Experience of last year in the tournament held at Bikaner when official and open complaints and charges were lodged and levied against the students and teachers of this college.

According to me cancellation of tournament would be right when instead of friendliness and Sportsmanship such organisations give rise the unhealthy, rivalry and ugly situations,

Sd./-S.Bharatiya

प्रतिलिपि क्रमांक 22625 दिनांक 18-7-70 खोर से प्रवानाचार्य चौ. बा. रा गो राजकीय कन्या विद्यालय, श्रीगंगानगर, को, सचिव, विश्व-विद्यालय क्रीड़ा परिषद जयपुर ।

विषय : 1970-71 की महिलाओं की खेल प्रतियोगिता की व्यवस्था करने हेतु ।

संदर्भ : आपका पत्र क्रमांक यू एस. वी ड. 70-71/1913 दिनांक 13-7-70 ।

उपरोक्त विषय में लेख यह है कि आपने 1970-71 की महिला खेलकूद प्रतियोगिता की व्यवस्था करने के सम्बन्ध में मुझे लिखा है परन्तु मैं आपको इस सम्बन्ध में सूचित करती हूँ कि एक महाविद्यालय ही सदा खेलकूद प्रतियोगिता की व्यवस्था करता रहे यह कैसे सम्भव हो सकता है । इस पर बहुत अधिक खर्च आता है । 3500 रुपये में महिलाओं के टूर्नामेंट नहीं करवाये जा सकते । आपने यह भी लिखा है कि अगर कोई महाविद्यालय इसको करवाने में इच्छुक नहीं होगा तो महाविद्यालयों के टूर्नामेंट रद्द कर दिये जावेंगे । परन्तु महिलाओं के टूर्नामेंट को इस प्रकार रद्द करते रहे तो एक समय आयेगा कि राजस्थान की महिलायें खेलों में पीछे रह जायेंगी । एक बार जो चीज रह जाती है उसको दोबारा उपर उठाने में समय लगता है । आगे भी राजस्थान की महिलायें काफी पीछे हैं उनके स्तर को ऊपर उठाना है न कि मिटाना । इस सम्बन्ध में मेरे निम्नलिखित सुझाव हैं :—

(1) अभी तत्काल ही राजस्थान विश्वविद्यालय से मन्जूरी लेकर सभी महिला प्रवानाचार्यों की मीटिंग बुलाई जानी चाहिये और उसमें यह निर्णय लिया जाना चाहिये कि सभी महाविद्यालयों को बारी-बारी टूर्नामेंट करवाने होंगे चाहे वह इच्छुक हो या नहीं । प्रत्येक को करवाना आवश्यक होगा यह नियम सभी महाविद्यालयों पर अनिवार्य होना चाहिये ताकि किसी एक महाविद्यालय पर लगातार जिम्मेदारी न पड़ती रहे ।

(2) और दूसरी बात यह है कि इसमें उदयपुर विश्वविद्यालय तथा जोधपुर विश्वविद्यालय के कन्या महाविद्यालयों को भी इस खेल-कूद प्रतियोगिता में शामिल किया जाना चाहिये । राजस्थान में महिलाओं के वैसे ही कम महाविद्यालय हैं इसलिये इन दोनों को मिलाने से कुछ संस्था तो बढ़ेंगी ।

सभी महाविद्यालयों के आचार्यों से बातचीत होने पर फैसला अच्छी प्रकार हो जायगा । मैंने अभी तक अपने कार्यकाल में सन् 1963 से आज



तक तीन टूर्नामेंट करवाये हैं। और टूर्नामेंट के लिए आप 3500 रुपये ही प्रत्येक वर्ष मन्ज़ूर करते हैं परन्तु इससे टूर्नामेंट की व्यवस्था नहीं हो सकती। कम से कम 6000 रु० की स्वीकृति होनी चाहिये तब जाकर यह टूर्नामेंट करवाया जा सकता है। क्योंकि कालेज शिक्षा विभाग से तो इसके लिये कुछ भी पैसा नहीं मिलता। उन्होंने हमें लिखा है कि इसका सारा खर्चा विश्वविद्यालय ही देगा। यह कार्यालय कोई राशि प्रदान नहीं करेगा। आप स्वयं सोच सकते हैं कि 3500 रुपया में कैसे टूर्नामेंट की व्यवस्था की जा सकती है जब कि मंहगाई बहुत बढ़ चुकी है। इसलिए कम से कम 6000 रुपया की राशि टूर्नामेंट करवाने के लिये स्वीकृत होनी चाहिये।

अंत में आपसे अनुरोध है कि आप तत्काल ही सरकारी तथा प्राइवेट कन्या महाविद्यालयों की राजस्थान विश्वविद्यालय से स्वीकृति लेकर मीटिंग बुलाई जानी चाहिये तब जो भी निर्णय हो उस पर विचार किया जाना चाहिये। मेरा यही विचार है कि 1970-71 की खेलकूद प्रतियोगिता को रद्द न करते हुये एक मीटिंग बुलाई जाये।

मुझे आशा ही नहीं बल्कि पूर्ण विश्वास है कि आप इस ओर अवश्य ध्यान देंगे।

एम० डी० रमाकोचर,  
प्रधानाचार्य

## APPENDIX X

(Ref. Syndicate Reso. No. 27 dated 1st Feb., 1971)

The Committee appointed by the Syndicate vide its Resolution No. 34 dated the 14th August, 1970 met on Tuesday, the 15th December, 1970 at 11.30 A.M. in the University Office, Jaipur, when the following were present—

1. Dr. P.N. Mathur (Convener)
2. Prof. K.L. Varma
3. Dr. K.C. Khanna

(2) According to the terms of reference given to it by the Syndicate, the Committee examined the following observations made by the Senate vide its Resolution No. 11 (iii) and (iv) passed at its meeting held on 21st March, 1970:

(1) परिनियम संख्या 95 में सीनेट की कार्यवाही विवरण के लिखे जाने के सम्बन्ध में निम्नलिखित प्रावधान करने के बारे में मिडीकेट विचार करे —

(अ) सदस्यों द्वारा व्यक्त किए गए महत्वपूर्ण विचारों का उल्लेख किया जावे ।

(ब) परिनियम संख्या 90 ए० के अन्तर्गत पूछे गये प्रश्न तथा उनके उत्तर यथावत् लिखे जावे ।

(2) सीनेट के सदस्यों को पूरक प्रश्न पूछने का अधिकार देने हेतु परिनियम संख्या 90 ए० में आवश्यक संशोधन करने के बारे में मिडीकेट विचार करें ।

(3) The existing Statute 95 of the University Hand Book Pt. II lays down—“only decisions, not speeches, shall be printed in the records.” This practice applies to the working of all other bodies of the University. Some questions which are important lead to a lot of discussion, sometimes lasting over an hour or two. The object of the procedure is finally to record the decisions reached, unanimously or by the majority. In case a particular member or members wish that their dissent should be recorded that is permissible. But the names of individual members and the views advanced by them are not recorded. The object of this procedure obviously is to emphasis the decisions taken and not to highlight the names and the views of individuals howsoever important their contribution may be. Apart from continuing

with the existing practice, which is sound, the suggested change would involve extra labour in taking notes of individual speeches, extra expenditure and would also lead to unavoidable complications which need not be explained. It is, however, conceivable that if in the course of a discussion involving important decisions contrary points of view have been well made, such points of view may broadly be mentioned without reference to the names of individuals in order to place on record that the final decision taken was not oblivious of those contrary points of view.

(4) Statute 90-A of the University Hand Book Part II provides that members may ask questions for the purpose of eliciting information on a matter concerning the University. For this purpose various limitations are provided, the object of which is that the purpose for which the permission to ask questions was given is properly served. To safeguard this purpose, clause 2 (a) of S.90-A entitles the Vice-Chancellor to dis-allow a question on the ground that it cannot be answered consistently with the interest of the University. Clause 2 (b) says that the decision of the Vice-Chancellor shall be final and no discussion there on can be permitted.

The main condition for asking question is given in clause (4) of this Statute according to which notice of questions to be answered must be not less than 15 days before the date of the meeting. In the face of this provision in the Statute, if time permits after the written questions have been answered, the Vice-Chancellor has been liberal enough in the past to allow members to ask questions on the spot. It is considered good and proper to fully serve the object of answering questions that questions should be asked in writing.

(5) So far as the question of answering Supplementary questions is concerned, the need for the same will diminish if the original answers have been properly considered and framed. We think that in this regard the pattern followed by the University of Madras (Vide Appendix) is worth a serious consideration. According to this, the questions received in writing are considered at a meeting of the Syndicate in the first instance and the replies are drafted. It is understandable that if after these replies have been read out in the meeting of the Senate, the questioner or any other member of the Senate wishes to put a supplementary question a member of the Syndicate conversant with the nature of the answer may seek permission to reply to the same. If supplementary question is of a kind which is not in the interest of the University it should be dis-allowed by the Vice-Chancellor.

(6) The limit for asking questions and supplementary questions in the Statute is half an hour and we see no reason to recommend an extension to the same.

(7) So far as the supplementary questions are concerned the Committee is of the view that members should be encouraged to ask questions from the University authorities throughout the year if they wish to do so. In such a case when the University is prepared to supply information at any time, perhaps the need of asking supplementary questions would not arise.

(8) While considering these recommendations of the Committee, the Syndicate may also apply its mind to the questions whether the questions asked and the answers given should form a part and parcel of the proceedings of the Senate.

Sd/-P.N. Mathur

*Convener.*

## Copy of Statutes 23-33 of the University of Madras Act.

## QUESTIONS &amp; ANSWERS

- Statute Questions. 23. At any ordinary meeting of the Senate any member may ask any question for the purpose of obtaining information from the Syndicate on any matter concerning the University.
- Statute Disallowance of questions. 24. The Syndicate may disallow a question on the ground that it cannot be answered consistently with the interests of the University.
- Statute Rules Re: questions. 25. No question shall be admitted unless it complies with the following conditions :—
- (a) it shall not publish any name or statement not strictly necessary to make the question intelligible;
  - (b) if a question contains a statement, the member asking it shall make himself responsible for the accuracy of the statement;
  - (c) it shall not contain arguments, inferences, ironical expressions or defamatory statements;
  - (d) it shall not ask for an expression of opinion or the solution of an abstract legal question or of a hypothetical proposition;
  - (e) it shall not refer to the character or conduct of any person, except in his official capacity as connected with the University.
- Statute Notice of questions. 26. Any member who intends to ask a question shall forward to the Registrar a notice in writing to that effect, together with a copy of the question to be asked, so as to reach him not less than thirty clear days before the date of an ordinary meeting.

No persons can ask more than 15 (fifteen) questions and no question shall refer to more than one subject.

Statute. 27. After the last date for the receipt of questions the Syndicate shall consider the admissibility or otherwise of the questions and the answers that should be given thereto.

Statute. 28. (a) The Syndicate shall decide on the Disallowance of questions, and Syndicate's decision. admissibility of a question and shall disallow any question which, in its opinion, contravenes the provision of these Laws, notifying to the person concerned the ground on which the question was disallowed.

(b) The Syndicate may also disallow, at its discretion.

(c) Any question which involves the preparation of elaborate statements or Statistics, and,

(d) Any question the answer to which involves an excessive amount of time and labour.

(e) The decision of the Syndicate shall be final and no discussion there on shall be permitted at any meeting of the Senate.

Statute. 29. Questions which have been admitted and Answers to questions. the answers thereto shall be printed and circulated to the members of the Senate along with the amended agenda.

Statute. 30. The Chairman shall call out the name of Answering of questions at meetings. each questioner in the order in which the names are printed, specifying the serial number of his question, and make a sufficient pause to give him or any other member a reasonable opportunity of rising in his place, and putting a supplementary question. Supplementary questions must be put immediately after the principal question to which they relate.

Unless otherwise decided upon by the Senate at a meeting, the time allotted for answering questions shall not exceed one hour.

Statute. 31. Any member may put a supplementary question for the purpose of further elucidating any matter of fact, regarding which an answer has been given, provided that the Chairman shall disallow any supplementary question, if in his opinion, it infringes the laws. The decision of the Chairman shall be final and no discussion shall be permitted at any meeting of the Senate.

Supplementary questions shall be answered by members nominated by the Syndicate for the purpose.

Statute. 32. The Chairman may decline to allow a supplementary question being put without notice, and the member nominated to answer any supplementary question may decline to answer it without notice, in which case the supplementary question may be put by the questioner only in the form of fresh question at a subsequent meeting of the Senate.

Statute. 33. No discussion shall be permitted in respect of any question or of any answer given to a question.

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## APPENDIX XI

(Ref. Syndicate Res. No. 29 dated 1st. Feb., 1971)

(Academic Section)

Revised Scheme of printing and circulation of minutes of the various bodies of the University.

At present the minutes of the various bodies of the University are first typed, then stencilled and cyclostyled and finally printed in half-yearly volumes. The cyclostyled copies are circulated to the members of the body concerned and submitted to the higher bodies for consideration. Cyclostyled copies of the minutes of the Syndicate are circulated to the members of the Senate for their perusal but for Appendices they are informed that printed volume of minutes will be supplied when available. The printed volume of minutes is generally available 6 to 8 months after the end of the relevant half year and sometimes even more than that. The printed volume of minutes are distributed to the members of the Senate, Syndicate, Academic Council and Faculties at the time of their meetings.

It is proposed that stencilling and cyclostyling of minutes of the various Statutory bodies of the University, viz., Boards of Studies/Committees of Courses, Faculties, Research Board, Publication Board, Inspection Board, Sports Board, Finance Committee, Equivalence Committee, Academic Council, Syndicate and Senate, may be dispensed with and the minutes of each meeting be got printed as soon as the approved draft is available. This will result in a saving of approximately Rs. 10,000/- per annum and also bring about efficiency. The following scheme is suggested for the purpose:—

- (i) There may be three minutes volumes for each session—one for the minutes of the Boards of Studies/Committees of Courses for the entire session and two for the minutes of other bodies for the period January to June and July to December.
- (ii) The minutes of the Boards of Studies will be printed in the order in which they are received from the Conveners. The minutes of other bodies could be printed in the order of dates of their meetings.
- (iii) 250 copies of the minutes of each meeting may be got printed for the minutes volume, As many off-prints as required may be obtained for circulation to the members.



- (iv) The off-prints of the minutes of each meeting may be circulated to the members of the various bodies in the same way as cyclostyled copies are circulated at present. Moreover while sending the minutes of the Syndicate to the members of the Senate, minutes of other bodies considered by the Syndicate may also be supplied to them.
- (v) Since the minutes will be printed regularly as and when they are available, the minutes volume duly bound will be ready soon after the end of the relevant half year/session. One copy of each volume may be supplied to each University Department, University College/Undergraduate Wing, University Library and affiliated college for reference and record. About 175 copies will be distributed in this way and 75 copies left for office use.

The Manager of the University Press has been consulted. He will be able to give proofs of 50 pages in 4 or 5 days and thus the minutes of each meeting will ordinarily be printed within one week after the approved draft is available. However, if at any time, this is not possible, the minutes will be cyclostyled and circulated to the members.

If this scheme is approved, it will be implemented from July, 1971.

## APPENDIX XII

(Ref. Syndicate Reso. No. 30 dated 1st Feb., 1971)

## (ACADEMIC SECTION)

The Committee re-constituted by the Syndicate vide its Res. No. 19 dated the 1st May, 1969 for considering the suggestions for revising the Teacher Agreement Form as incorporated in O.68 of the University Hand Book Part II for teachers of the non-Government affiliated colleges, met on 13th September, 1970 and 10th January, 1971 in the University office, Jaipur when the following members were present—

- (1) Dr. M.P. Mathur, (Convener)  
Director of Education,  
Rajasthan.
- (2) Prof. K.L. Varma, Jaipur.
- (3) Principal, S.C. Tela, Sri-Ganganagar.  
Shri J.N. Mathur, Dy. Registrar (Secretary)

N.B.: Principal S.C. Tela was not able to attend the meeting on 13th September, 1970.

(2) The Committee perused and examined the under mentioned rules/suggestions—

- (i) O.67 and O.68 of the University Hand Book Part II.
- (ii) The draft teacher agreement form suggested by Shri V.V. John and Shri L.P. Vaish in pursuance of Syndicate Res. No. 10 dated the 8th June, 1963.
- (iii) Suggestions of Principal D. Vable, Dayanand College, Ajmer as contained in his letter No. 4122 dated the 6th April, 1963.
- (iv) Suggestions of Rajasthan University and College Teachers Association as contained in letter No. 155 dated the 6th March, 1967 from the General Secretary.
- (v) Suggestions from the Principal, Shri Jain Post-graduate College, Bikaner as contained in letter No. TR/AGT/3741 dated the 4th January, 1969, and
- (vi) The Teacher Agreement Form as prescribed by the Agra University and the Meerut University.

(3) The Committee was of the view that the Agreement Form should be separately prescribed for Principals of non-

Government affiliated colleges as is done by the Agra University and the Meerut University.

(4) After full deliberations, the Committee made the following recommendations :—

- (I) O.67 (page 173-74) of the University Hand-Book Pt. II be reworded so as to read as follows :

“O.67—The Principal and all members of the teaching staff of the college other than those maintained by the State, shall be appointed on a written contract which shall be on a duly stamped paper and as per proforma laid down by the University.”

*Explanation for the above amendment :*

The detailed provisions in the Ordinance are superfluous because the same will form part of the next O.68 in which the text of the Agreements Form is given. Besides, the present O.67 leaves room for the colleges to include in the form of agreement other things also which they deem fit to do so. The Committee feels that the Agreement Form should be perfectly uniform for all the non-Government affiliated colleges.

- (II) O.68 (page 174) of the University Hand Book Pt. II containing the text of the agreement form for teachers of non-Government affiliated colleges be re-written. (*Vide Annexure 'A'*)
- (III) A New Ordinance No. 68-A be introduced so as to prescribe an Agreement Form for the Principals of non-Government affiliated colleges.  
(*Vide Annexure-B'*)

Sd/-

Convener.

## ANNEXTURE-‘A’

The following form of Agreement is hereby prescribed to be adopted by the non-Government affiliated colleges for appointment to the teaching posts (except Principal) :—

Agreement made this .....&.....day of.....  
19.....between.....of the first  
part and the Managing Committee of.....  
.....College.....through  
the Principal/Secretary of the second part :—

Where as the college has engaged the party of the first part to serve the college as.....subject to the conditions and upon the terms hereinafter contained, this agreement witnesseth that the party of the first part and the college hereby contract and agree as follows :—

- (1) That the engagement shall come into effect from the.....day of ..... ,19.....and shall be determinable as hereinafter provided.
- (2) That the party of the first part is employed in the first instance, on probation for a period of one year and shall be paid a monthly salary of Rs.... in the grade of Rs.....and will be entitled to the benefits of the provident fund in accordance with the provisions and rules laid down by the University for the purpose. The salary will be paid by means of cheque not later than fifteenth day of each month.
- (3) That the party of the Second part may, at its discretion, extend the period of probation by another year, so that the total period of probation shall in no case exceed two years. If within three months of the expiry of the period of probation no notice of termination of this agreement or of an extension of the period of probation is received by the party of the first part, the party of the first part will be ipso-facto taken as confirmed. Grade increment shall be earned on confirmation.
- (4) That the party of the first part shall not engage in any trade or business, or in other activity which in the opinion of the Principal, may be prejudicial to his work in the college.

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The grade shall not be lower than that laid down by the University.

- (5) That the party of the first part shall not apply for any job or appointment whether part-time or in any other form elsewhere without prior permission of the Principal of the college in writing.
- (6) After confirmation, the services of the party of the first part can be terminated only on the following grounds :
  - (a) Wilful neglect of duty,
  - (b) Misconduct (including persistent disobedience or Moral turpitude,
  - (c) Breach of any term of the contract,
  - (d) Physical or mental unfitness, or
  - (e) Incompetence, provided this plea shall not be used after five years' continuous service in the institutions.
- (7) Except when termination of service has taken place under para 6(a), (b) and (c), neither party shall terminate this agreement save by giving to other party three months' notice in writing or by paying a sum equivalent to thrice the monthly salary then being earned by the party of the first part.
- (8) While the party of the first part is on probation as provided in para 2, there will be three months notice on either side of termination of the contract, or in lieu of such notice a payment of thrice the monthly salary then being earned by the party of the first part.
- (9) Any difference or dispute of any kind whatsoever arising out of this contract shall be referred to arbitration and determined in accordance with the provisions of the Indian Arbitration Act, 1940. Such Arbitration shall be held by two persons not associated with the college—one to be chosen by each party to this agreement, and in case of their non-agreement, the Vice-Chancellor or his nominee shall act as Umpire, the decision of the arbitrators or of the Umpire, as the case may be, shall be final. No party to this agreement shall have a right to sue the other in a court of Law, except for the purpose of enforcing the award.

*N B.* : This clause shall not apply in the case of a dispute arising in connection with the termination of the service of any member of the teaching staff who is on probation or on a temporary basis.

Singed this..... day of....., 19.....

1)

2)

in the presence of

1)

2)

## ANNEXTURE-B

0,68-A :

The following form of agreement, is prescribed for being adopted by the Non-Government affiliated colleges for appointment to the post of Principals :

Agreement made this..... day of .... 19..... between .....of the first part (hereinafter called the Principal) and the.....(hereinafter called the Managing Committee) of..... college .....through the President of the Second Part.

Where as the Committee has engaged the party of the first part to serve the college as Principal subject to the conditions and upon the terms hereinafter contained, this agreement witnesseth that the party of the first part and the Managing Committee hereby contract and agree as follows :—

- (1) That the agreement shall come into effect from the ... ..day of ..... , 19.....and shall be determinable as hereinafter provided.
- (2) That the Principal is employed, in the first instance on probation for one year and shall be paid a monthly salary of Rs.....in the grade of Rs. ....and will be entitled to the benefits of the Provident Fund in accordance with the provisions and rules laid down by the University for the purpose. The salary will be paid by means of cheque not later than fifteenth day of each month.
- (3) That the party of the second part may, at its discretion, extend the period of probation by another year, so that the total period of probation shall, in no case, exceed two years. If within three months of the expiry of the period of probation no notice of termination of this agreement or of an extension of the period of probation is received by the Principal, he/she will be taken as ipso-facto confirmed. Grade increment shall be earned on confirmation.
- (4) The Principal shall perform all such duties as appertain to the Principal of an affiliated college and

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The grade shall not be lower than that laid down by the University.

shall be responsible for the due discharge of all such duties. The Principal shall be solely responsible for the internal management and discipline of the said college including the arrangement of the college time-table, the allocation of duties to all the members of the college staff, including duties of warden, proctor and other assignment connected with the internal administration of the college, the grant of leave to staff, the appointment, control and removal of the Lower Division Clerks, Laboratory Assistants, Technicians, gardeners and other class IV staff, the granting of free-ships/half free-ships and other types of financial aid to students within the numbers sanctioned by the Government or the Management, as the case may be, the control of the college hostel or hostels through the warden, the admission, promotion, punishment of students, the organisation of games and other activities. He shall administer all students' funds such as Games fund, Magazine fund, Union fund, Reading Room Fund, Examination Fund etc., with the help of a committee constituted by him and in accordance with any rules laid down by the University and subject to audit and scrutiny of accounts by the Management. He shall have all powers necessary for the purpose including power, in an emergency to suspend members of the teaching staff pending report to and decision by the Managing Committee. In the spheres of his also responsibility, he shall follow the directions received from the University or Government in connection with the administration of the college. In financial and other matters for which he is not solely responsible the Principal shall follow the directions of the Managing Committee as issued to him through the Secretary. All instructions by the Managing Committee or the Secretary to the members of the staff shall be issued through the Principal and no member of the staff shall have a direct approach to any members of the Managing Committee except through the Principal.

The Principal shall have all necessary powers of control and discipline in regard to clerical and administrative staff, including the power to withhold increments. All appointments in the office of the Principal shall be made with his concurrence.

- (5) That the Principal shall be an ex-officio member of the Managing Committee and of all appomement



committees with power to vote provided he shall not be a member of a committee appointed to enquire into his own conduct.

- (6) That the Principal shall devote his whole time to the duties of his appointment and shall not engage directly or indirectly in any trade, buseness, or in any other activity which in the opinion of the Management may be prejudicial to his work in the college.
- (7) That the Principal shall not apply for any job or appointment whether part-time or in any other form elsewhere without prior permission of the Managing Committee in writing.
- (8) After confirmation, the services of the Principal can be terminated only on the following grounds:—
  - (a) Wilful neglect of duties;
  - (b) Misconduct; including disobedience to the orders of the Managing Committee passed in accordance with the terms of this agreement and Statutes, Ordinances, Rules, Regulations and directions of the University; or Moral turpitude;
  - (c) Breach of any term of the contract;
  - (d) Physical or mental unfitness; or
  - (e) Incompetence; provided this plea shall not be used after three years' service in the institution.
- (9) Except when termination of services has taken place under para 8(a), (b) & (c), neither party shall terminate this agreement save by giving to other party three months' notice in writing or by giving a sum equivalent to thrice the monthly salary then being earned by the Principal.
- (10) While the Principal is on probation as provided under para 2, there will be three months' notice on either side, of termination of the contract or in lieu of such notice a payment of thrice the monthly salary then being earned by the Principal provided that such termination of the contract will not take place between the first day of January and 31st day of March of any year.

- (11) Any difference or dispute of any kind whatsoever arising out of this contract shall be referred to arbitration and determined in accordance with the provisions of the Indian Arbitration Act, 1940. Such Arbitration shall be held by two persons not associated with the college one to be chosen by each party to this agreement, and in case of their non-agreement, the Vice-Chancellor or his nominee shall act as Umpire. The decision of the arbitrators or of the Umpire, as the case may be, shall be final. No party to this agreement shall have a right to sue the other in a court of Law, except for the purpose of enforcing the award.

N.B. This clause shall not apply in the case of a dispute arising in connection with the termination of the services of the Principal who is on probation or on a temporary basis.

Signed this.....day of.....19.....

(1) .....

(2) .....

In the presence of :

(1) .....

(2) .....

MINUTES OF THE MEETING OF THE FACULTY  
OF SCIENCE HELD ON 8-2-1971 AT 12.00  
NOON IN THE HUMANITIES HALL,  
UNIVERSITY CAMPUS, JAIPUR.

**Present :**

Dr. P. N. Mathur,  
Dean (*In the Chair*)

- |                          |                             |
|--------------------------|-----------------------------|
| 2. Dr. J.N. Tandon       | 3. Shri R.B. Mani           |
| 4. Dr. S.K. Verma        | 5. Shri R.M. Bhandari       |
| 6. Shri N.P. Vadehra     | 7. Shri M.M. Khatri         |
| 8. Shri V.K. Saxena      | 9. Shri Ram Gopal           |
| 10. Shri Manak Raj Jain  | 11. Shri Hari Prasad Sharma |
| 12. Dr. R.C. Mehrotra    | 13. Dr. G.C. Shivhare       |
| 14. Dr. S.N. Swami       | 15. Shri M.S. Chhonkar      |
| 16. Dr. C.S. Bhatnagar   | 17. Shri Ashwani Kumar      |
| 18. Shri G.S. Bhandari   | 19. Dr. B L. Saraf          |
| 20. Dr. A.N. Bose        | 21. Dr. Indra Pál           |
| 22. Shri R.P. Tewari     | 23. Shri R N. Mehrotra      |
| 24. Shri M.K. Mehrishi   | 25. Dr. V. Shankaram        |
| 26. Dr. M.P. Saxena      | 27. Shri Champalal Mathur   |
| 28. Shri S.M. Murdia     | 29. Shri K.D. Saxena        |
| 30. Shri M.L. Sharma     | 31. Shri D.G. Moghe         |
| 32. Mrs. Sarla Tandon    | 33. Mrs. Pramod Rani Gupta  |
| 34. Mrs. S. Jijja        | 35. Mrs. Sneh Srivastava    |
| 36. Shri R.S. Bhatnagar  | 37. Shri A.P. Trivedi       |
| 38. Shri J.M. Srivastava | 39. Dr. R.S. Mathur         |
| 40. Dr. C.L. Mahajan     | 41. Shri R.K. Kaushik       |
| 42. Shri M.S. Rathore    | 43. Shri R.B. Nigam         |
| 44. Dr. D. Gupta         | 45. Shri B.B. Nigam         |

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|------------------------------------|-------------------------------------|
| 46. Shri R.L. Barajatyā            | 47. Dr. G.C. Patni                  |
| 48. Dr. B.D. Tikkiwal              | 49. Dr. K.C. Joshi                  |
| 50. Dr. L.S. Ramaswami             | 51. Shri M.L. Soni                  |
| 52. Shri Sudhir Bhargava           | 53. Shri Hem Chand Singhvi          |
| 54. Shri Harish Chandra<br>Parihar | 55. Shri N.L. Agarwal               |
| 56. Dr. M.M. Singh                 | 57. Shri S.K. Rathi                 |
| 58. Shri Gulab Singh Sengar        | 59. Dr. M.N. Nigam                  |
| 60. Dr. A.P. Shitoot               | 61. Dr. K.C. Sharma                 |
| 62. Dr. P.D. Verma                 | 63. Dr. Y.K. Gupta                  |
| 64. Shri Shyam Narain Mathur       | 65. Dr. R.L. Mittal                 |
| 66. Shri A.K. Kulshreshtha         | 67. Dr. M.C. Gupta                  |
| 68. Shri P.K. Bansal               | 69. Shri H.C. Chaturvedi            |
| 70. Shri B.N. Roy                  | 71. Dr. M.W. Chaudhari              |
| 72. Shri Purshottam Paranjape      | 73. Shri G.C. Saxena                |
| 74. Shri K.B.S. Dhillon            | 75. Shri K.S. Dhillon               |
| 76. Shri M.D. Ahuja                | 77. Shri R.C. Gaur                  |
| 78. Shri S.N. Dube                 | 79. Dr. Sarnam Singh Sharma         |
| 80. Shri Ram Avadh Singh           | 81. Shri R.K. Chaturvedi            |
| 82. Dr. S. Lokanathan              | 83. Shri Krishana Chandra<br>Sharma |
| 84. Shri R.K. Bhartiya             | 85. Shri G. Raju                    |
| 86. Dr. A.N. Nigam                 | 87. Shri S.G. Saxena                |
| 88. Shri A.I.P. Sinha              | 89. Shri S.K. Tondon                |
| 90. Dr. M.K. Pandya                | 91. Shri Sohan Singh Sondhi         |
| 92. Shri Kailash Chandra Jain      | 93. Shri G.P. Mishra                |
| 94. Shri B. Puri                   | 95. Dr. R.C. Bhandari               |
| 96. Dr. M.L. Gupta                 | 97. Shri S.S. Bhargava              |
| 98. Shri Baljeet Singh             | 99. Shri B.N. Gupta                 |
| 100. Shri A.P. Bais                | 101. Dr. M.V. Sabnis                |
| 102. Shri C.M. Mittal              | 103. Dr. C.M. Gupta                 |

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|--------------------------|-----------------------------------|
| 104. Dr. S.D. Gupta      | 105. Shri Y.K. Srivastava         |
| 106. Shri K.B.L. Sharma  | 107. Mrs. Santosh B. Luthra       |
| 108. Mrs. Gulab Dudeja   | 109. Dr. (Miss) K. Zutshi         |
| 110. Mrs. M.K.S. Rao     | 111. Shri O.P. Mittal             |
| 112. Dr. P.N. Srivastava | 113. Dr. B. Tiagi                 |
| 114. Shri Harbans Singh  | 115. Shri A.S. Randhawa           |
| 116. Dr. J.P. Tandon     | 117. Dr. Dalbir Singh             |
| 118. Dr. Naresh Chandra  | 119. Dr. S.S. Dube                |
| 120. Shri H.B. Saxena    | 121. Shri G.L. Bohra              |
| 122. Dr. B.R. Luthra     | 123. Shri Mohan Lal Rawat         |
| 124. Shri Naresh Singh   | 125. Shri S.S. Lal Mathur         |
| 126. Shri P. Sinha       | 127. Shri I C. Gaur               |
| 128. Dr. Kashi Prasad    | 129. Dr. J.P. Mathur              |
| 130. Dr. S.C. Saxena     | 131. Dr. N.C. Sogani              |
| 132. Shri S.K. Gangwal   | 133. Shri Prakash Chandra<br>Jain |
| 134. Shri P.K. Gupta     | 135. Shri S.N. Dutta              |

Shri J. N. Mathur,  
*Dy. Registrar.*

Before proceeding with the business on the agenda, the Faculty recorded its sense of deep grief on the sad demise of Prof. C.V. Raman the distinguished Scientist of India, Prof. G.C. Chatterji, Ex. Vice-Chancellor of the University as also of the two of its members viz., Prof. R.S. Varma and Shri A.B.L. Saxena. All the members stood in silence for two minutes to pay homage to the departed souls.

(1) The minutes of the meeting of the Faculty of Science held on the 31st January, 1970 were confirmed with the observation that the Syndicate be requested to take steps for implementing the recommendation No. 25 of the afore-said meeting of the Faculty to the effect that three practical periods be treated as equivalent to three theory periods as per provision of 0.71 of the University Hand Book Pt. II.

(2) The Faculty appointed the following members on the Boards of Studies as noted against each for the residue of the term, that is to say, upto 27th April, 1972 :—

- (i) Dr. Naresh Chandra,  
University Reader in Botany  
(Vice Dr. Y.D. Tyagi left)—Board of Studies  
in Botany.
- (ii) Prof. P.N. Srivastava,  
Head of the University Department  
of Zoology  
(Vice Prof. L.S. Ramaswamy (ceased as Post-  
graduate Head)—Board of Studies in Zoology.
- (iii) Dr. O.N. Saxena,  
University Lecturer in Zoology  
(Vice Shri A.B.L. Saxena (Deceased)  
Board of Studies in Zoology.
- (iv) Dr. D.K. Mathur,  
Principal and Head of the Post-graduate  
Department of Zoology, Govt. College, Kota  
(Vice Shri S.L. Mathur (ceased)—Board of  
Studies in  
Zoology.
- (v) Prof. R.S. Kushawa,  
Head of the Department of Mathematics.  
University of Jodhpur, Jodhpur—External  
Member  
(Vice Prof. R.S. Varma deceased)—  
Board of Studies in Mathematics,

N, B.—Item No. 20 of the agenda for appointment of a member on the Board of Studies in Chemistry vice Dr. M.V. Sabnis was withdrawn in view of the information since received that Dr. Sabnis had been transferred from Bikaner to R.R. College, Alwar where he continued to be the Head of the

Post-graduate Department in Chemistry and, therefore, did not cease to be a member of the Board,

(3) With reference to the Faculty of Science Res. No. 7 (iii) dated 31.1.1970, the Faculty considered the proposal of Shri S. K. Rathie, Professor and Head of the Department of physics, Dungar College, Bikaner as contained in his letter dated 29.11.1969 to the effect that the remuneration for each member of the Board of Examiners for M. Sc. practical be the same.

*Resolved to recommend* that remuneration should be paid to the Internal examiners for practical examinations (right from pre-University up to M. Sc. examinations) and the rate of payment be the same as for external examiners for the respective examinations.

(4) With reference to its Res. No. 7(iv) dated the 31st January, 1970, referring the proposal of Dr. S. K. Rathie, Prof. and Head of the Department of Physics, Dungar College, Bikaner for removing the ambiguity in the list of experiments in Physics prescribed for Ist Year T. D. C. to the Board of Studies in Physics, the Faculty considered the recommendation of the Board of Studies in Physics as contained in its resolution No. 7 dated the 14.9.1970 stating that the list of experiments for Second Year and Third Year will be re-cast according to instruments and their use rather than specific measurements and that this will make a uniform pattern for all the three years for the Degree course.

*Resolved to recommend* that the matter be again referred back to the Board of Studies in Physics as it was felt by the members that the point of ambiguity as referred to by Dr. S. K. Rathie did not seem to have been met.

(5) With reference to its Res. No. 11 dated the 31st January, 1970 under which recommendation No. 10(ii) dated 20.9.69 of the Board of Studies in Chemistry about changing the ratio of marks of theory to practicals for M. Sc. Final

from 4:2 to 3:2 was referred to the Board of Studies in Chemistry for reconsideration and to other Boards of Studies under the purview of the Faculty for comments. the Faculty considered the observations of the various Boards of Studies as contained in their resolutions noted below :-

<i>Name of the Board of Studies</i>	<i>Res. No.</i>	<i>Summary of the observations.</i>
(a) Chemistry	9	In view of further information received, the present ratio of 400 marks in theory and 200 in practicals be continued.
(b) Geology	8	The recommendation of the Board of Studies in Chemistry dated 20-9-69 be not accepted.
(c) Botany	7	The Board agreed to a change in ratio of marks of theory to practical from 4:2 to 3:2 in the M. Sc. examinations.
(d) Physics	9	<p>The recommendation of the Board of Studies be respected for Chemistry.</p> <p>For M. Sc. Physics the present ratio of 4:2 for theory and practicals be retained.</p> <p>The distribution of marks for I, II and Final Year B. Sc. examinations should be in the ratio of 1:2:3.</p>
(e) Mathematics	9	No comments
(f) Statistics	4	The Board agrees with the recommendation of the Board of Studies in Chemistry dated 20-9-69.



(g) Zoology 9 Not in favour.

*Resolved to recommend* that (i) status-quo be maintained with regard to ratio of marks of Theory to practicals for the M. Sc. Final, (ii) the recommendation of the Board of Studies in Physics to the effect that the distribution of marks for Ist, IInd and Final B. Sc. examination should be in the ratio of 1:2:3 be referred to all other Boards of Studies in the purview of the Faculty of Science.

(6) With reference to its Res. No. 12 dated 31-1-1970, the Faculty considered the recommendation No. 8 dated 25-9-1970 of the Board of Studies in Chemistry suggesting a separate syllabus for the proposed qualifying test paper in Mathematics to be cleared by the candidates who pass B. Sc. examination without optional Mathematics.

*Resolved to recommend* that (i) candidates who did not offer Elementary Mathematics or Optional Mathematics at the B. Sc. examination be required to clear the Elementary Mathematics paper as prescribed for the First Year T. D. C. Science examination of the University in the compulsory group, (ii) the syllabus for the Elementary Mathematics paper as proposed by the Board of Studies in Chemistry and agreed to by the Convener, Board of Studies in Mathematics in the meeting itself be approved and (iii) the following consequential changes in the relevant Ordinances of the University Hand Book Pt. II be made :—

Add the following proviso to the *Ordinance No. 234*

Provided that it will be necessary for a candidate seeking admission to the M. Sc. (Previous) Chemistry class to have already passed his B. Sc. examination with Mathematics as a compulsory or optional subject or to have cleared the Elementary Mathematics paper prescribed for the First Year T. D. C. Science examination of the University.

Add the following new Note No. 6 under *Ordinance 218* of the University Hand Book, Pt. II :—

A candidate who did not offer Elementary Mathematics or Optional Mathematics at the First Year T. D. C. examination may be allowed to offer Elementary Mathematics as an additional subject and appear in the Examination alongwith his IInd Year or IIInd Year examinations or in a subsequent year ( Main or Supplementary Examination).

(7) With reference to its resolution No. 14 (iii) dated 31-1-1970, under which recommendation No. 10 (c) dated 7-11-1969 of the Board of Studies in Physics for removing the condition of obtaining a minimum of 25% marks in each paper for the M. Sc. examination was referred to the Board of Studies in Physics for reconsideration and to other Boards for comments, the Faculty considered the recommendations of the various Boards of Studies as contained in their resolutions noted below :—

<i>Name of the Board of Studies</i>	<i>Res. No.</i>	<i>Summary of the observations.</i>
(a) Chemistry	10	No comments.
(b) Geology	9	The recommendation be not accepted.
(c) Physics	8	The Board resolved that the Faculty may reconsider it and pass it, this is of academic interest and is a very serious difficulty for the candidate.
(d) Botany	8	The Board did not agree with the recommendation.
(e) Mathematics	10	The Board is not in favour of deleting the same.
(f) Statistics	5	The Board did not agree with the recommendation.

(g) Zoology 10 Agreed with the Physics Board.

*Resolved that status-quo be maintained.*

(8) With reference to the Academic Council Res. No. 35 dated 21-4-1970 to the effect that in the interest of raising standards of teaching and examination and award of degrees, the Boards of Studies may prepare alternative Schemes of Courses and examinations, the *Faculty Postponed* consideration of the recommendations of the various Board of Studies as contained in their resolutions noted below :—

<i>Name of the Board of Studies</i>	<i>Res. No.</i>	<i>Summary</i>
(a) Chemistry	7	The Board has recommended a new syllabus for undergraduate classes this year and proposes <i>to consider</i> a new syllabus for post-graduate classes next year.
(b) Geology	7	Noted the resolution of the Academic Council-
(c) Physics	6	The Board approved it but action was delayed.
(d) Botany	6	The Board observed that the suggestion is not clear and more details are required.
(e) Mathematics	7	Agreed in principle but further consideration post-poned.
(f) Statistics	8	The Board proposes to consider the matter of revising the syllabiafter the academic Council has taken a decision regarding examination reforms on the recommendations of the Examination Reforms Committee.
(g) Zoology	8	Noted.
(h) Agriculture	3	Semester system be introduced.

9. It was reported to the Faculty that the Academic Council vide its Res. No. 4 dated the 28th October, 1970 considered a proposal of the National Council for Educational Research and Training for starting vacation-cumcorrespondence courses leading to B. Sc. and M. Sc. Degrees for teacher working in the Secondary Schools as contained in the D. O. letter No. F. 9-197/70,6215 dated the 23rd June, 1970 from the Principal, Regional College of Education, Ajmer, and resolved that (i) the proposal be accepted in principle only for the B. Sc. degree and (ii) the same be referred to the Faculty of Science for considering further details.

In this connection the Faculty considered laying down further details for starting vacationcom-correspondence courses for the B. Sc. Degree.

*Resolved that a Committee consisting of the following members be appointed to recommend necessary details together with the consequential additions and or alterations to the Ordinances/Regulations and the Chairman be authorised to place the report direct before the Academic Council :—*

- (i) Dean, Faculty of Science, Chairman.
- (ii) All conveners of the Borads of studies under the purview of the Faculty of Science (Except Agriculture).
- (iii) Dr. A.N. Bose—Regional College of Education Ajmer.

10. The Faculty considered the following suggestions of Shri P. C. Jain, Head of the Department of Mathematics, Govt. College, Kotputli duly forwarded by the Principal vide his endorsement No. G.C.K./3283 dated the 6th Aug, 1970:—

- (i) As the number of periods allowed for one paper is six, the number of periods for two theory papers in all subjects should be proportionately *twelve* instead of *nine* as present.
- (ii) There should be viva-voce examination in Mathematics at the Final Year T.D.C. stage also.
- (iii) The syllabus of Mathematics Paper I for the second year T.D.C. is too heavy and should be

suitably reduced to suit the calibre of students at this stage.

*Resolved that* (i) Status-quo be maintained in regard to the number of periods and (ii) consideration of proposals Nos. 2 and 3 above be deferred.

11. The Faculty considered recommendation No. 6 dated 26-9-70 of the Board of Studies in Statistics to the effect that instruction No. 4 in the instructions of examiners in practicals wherein it is stated that the Viva-voce examination should normally be conducted after the written examination, be deleted for different examinations at under graduate and Post-graduate levels.

*Resolved to recommend* that the recommendation of the Board be accepted.

The Faculty considered the following recommendations of the Board of Studies in Statistics as contained in its resolution No. 7 dated the 26th September, 1970 :—

- (i) In order to encourage research on a large scale it is necessary that those teachers who are either active in research or have potentiality for research should be given lesser work-load than others.
- (ii) Work experience be introduced for postgraduate students as well, along the lines already done for Three-year Degree course in the Final year.
- (iii) Some of the teachers in the Department be deputed in summer vacation to some applied organisations with a view to apprise them of the applied work done over there.
- (iv) Two laboratory supervisors be provided, one for post-graduate and one for under-graduate, as recommended earlier by the Board and subsequently approved by the Faculties of Arts and Science.

- (v) It is necessary that some of the affiliated colleges should start the teaching of Statistics at the under-graduate level at the earliest.

*Resolved to recommend* that proposal (i) be agreed to in principle and the rest of the proposals be accepted.

13 The Faculty considered the recommendation of the Board of Studies in English as contained in its resolution No. 8 dated the 23rd Oct., 1970 to the effect that an additional optional paper in General English be introduced in the Faculties of Science and Commerce also, for the Second and Final Year T. D. C. examinations also with effect from the Examination of 1972 and 1973 respectively.

*Resolved to recommend* that the aforesaid recommendation of the Board of Studies be not accepted for the Faculty of Science.

14 The Faculty considered the revised syllabus for special papers in Cell Biology for the M. Sc. Final Examination of 1973 proposed by the Head of the University Department of Zoology vide his letter No. UDZ/P/2295 dated the 14th Dec., 1970 and forwarded by the Dean of the Faculty of Science for being placed before the Faculty (Vide-Appendix I).

*Resolved to recommend* that the aforesaid syllabus be approved.

*Resolved to recommend* further that the aforesaid syllabus be made operative from the Exam. of 1972.

15 It is reported to the Faculty that the following suggestions made by the Vice-Chancellor in consultation with the Convener of the Examination Reforms Committee were placed before the Boards of Studies for their consideration:—

- (A) Regarding award of sessional marks, these may be awarded on the basis of Articulation, Comprehension and Objective Tests of the students as per details given below:—

*Articulation-4 marks.*

Each student may be required to write atleast one essay on the subject each term. This may be assessed by 2 independent teachers independently and marks recorded. Marks may be declared publicly and if any students feels aggrieved he may be explained why that particular award was given.

*Comprehension-3 marks*

A test may be conducted each term to examine whether the students have picked up the appropriate expression and have understood the subject matter.

*Objective test—3 marks*

Under this category marking may be done but the marks may not be shown to the candidate. But the solution may be written by the teacher and posted on the notice board so that the students may know the correct answers. If this rational basis is adopted there is a chance of increasing the quantum of internal assessment.

B. As regards syllabus at the post-graduate level I suggest that—

- (i) a list of full and half courses may be prepared according to the availability of teaching competence.
- (ii) it may be possible for a student to offer two full courses as a topic to give specialisation in that topic. Such a student would prepare himself for research in this topic.
- (iii) a student who wishes to learn the subject for becoming a teacher, he may offer 4 half courses covering a variety of topics to have an exten-

sive view of the subject. In fact the students may choose one full and two half courses.

- C. For very few bright students it may be suggested that they may be encouraged to do some self-study on pre-assigned topics which are not included in their curriculum and they may be assessed entirely on that as far as sessional marks are concerned.

In this connection the Faculty considered the recommendations of the following Boards of Studies as contained in their Resolutions noted against each :—

<i>Board of Studies</i>	<i>Res. No.</i>
(a) Chemistry	6
(b) Botany	5
(c) Geology	6
(d) Zoology	7
(e) Physics	5
(f) Agriculture	2
(g) Mathematics	6
(h) Statistics	8

*Resolved that* consideration be deferred.

16. The Faculty considered the following proposals of Dr. S.D. Gupta, Post-Graduate Head in Zoology, Dungar College, Bikaner, as contained in his letter dated the 7th January, 1971—

- (i) The Associate Post-graduate Heads in Colleges be treated equivalent to Readers in the University and allowed to enjoy all such privileges in the University Bodies as are enjoyed by the Readers in the University.
- (ii) First Year T.D.C. Science practical in Biology be held separately in Botany and Zoology.

*Resolved that* the aforesaid proposals be not accepted.



17. The Faculty considered the following proposal of Dr. B.L. Saraf, Professor and Head of the University Department of Physics, Jaipur as contained in his letter No. C.F.-11 Phy'71 dated the 13th January, 1971 :—

“The candidates of B.Sc. Honours Part I Course should be allowed to study the Part II Course in case they obtain the Pass marks. The restriction for obtaining 50 percent marks should not be applicable to B.Sc. Honours Physics students.”

In this connection the Faculty noted that a similar recommendation had been made by the Board of Studies in Physics vide its Res. No. 16 dated 14-9-70.

*Resolved to recommend* that the aforesaid recommendation be accepted for all the subjects of the B.Sc. Honours Examination and consequently the relevant O 227 of the University Hand Book Part II *be re-written* so as to read as follows :—

O.227: A candidate who after passing the B.Sc. (Honours) Part I Examination of the University has attended a regular course of study for one academic year in an affiliated/University college shall be eligible for admission to the B.Sc. (Honours) Part II examination which shall be conducted in the following subjects—

- (i) The Honours subject.
- (ii) The two pass subjects. The syllabus and question papers shall be common to the Final year of the Pass Course Examination.

18. With reference to the Academic Council Resolution No. 14 dated 21-4-1970 accepting the recommendations of a Committee appointed by the Vice-Chancellor under the convenership of Dr. Satish Chandra for examining the recommendations made by a Committee of the U.G.C. to visit the non-professional affiliated colleges, the Faculty considered

the recommendation of the aforesaid Committee to the effect that the University courses should be reorganised to make them more functional.

*Resolved that* the aforesaid recommendation of the Committee be noted.

19. The Faculty considered a letter No. F.Sc./Syllabus/71/21933 dated the 25th January, 1971 from Dr. A.N. Bose, professor and Head of Science Department, Regional College of Education, Ajmer suggesting changes to be made in the Ordinances in respect of B.Sc. (Hons.) B.Ed. Degree, B.Sc. (Pass) B.Ed. degree and Three Years Course for B.Sc. degree (*Vide Appendix-II*).

In this connection the Faculty also considered the recommendations of the Board of Studies in Physics, Chemistry, Mathematics, Botany and Zoology as contained in their Resolution Nos. 13, 12, 15, 14 & 16 respectively passed at their meetings held in September, 1970.

*Resolved to recommend that :*

- (i) The proposal for awarding 'B.Sc.' degree after passing the Third Year Examination of Four-Year B.Sc. (pass/Honours) B.Ed. Course be *referred* to the Committee appointed vide fore-going Resolution No. 9 of these minutes.
- (ii) The changes in the scheme of examination and syllabus as recommended by the various Boards of Studies for the B.Sc. (Pass/Honours) B.Ed. degree be accepted subject to the Syllabus for certain subjects as given vide Appendix 'A' to these minutes, and
- (iii) The existing Ordinances Nos. 238-E to 238 E-11 and 238F to 238F-8 & R-17 B-1 be *deleted*, and instead the following new ordinances Nos. 238E to 238E-12 and R-17-B1 be introduced—

FOUR YEAR TEACHER EDUCATION COURSE  
IN SCIENCE LEADING TO THE DEGREE OF  
B.Sc. (Hons.) B.Ed. AND B.Sc. (Pass) B.Ed.

*O.228 E.* The courses of study shall extend over a period of Four Years as an integrated course in Science and Education leading to the degree of Bachelor of Science (Honours/Pass) and Bachelor of Education (B.Sc. Honours/Pass B.Ed.) There shall be an University Examination at the end of each year.

*O.238 E-1* The examination shall be conducted by means of written papers and practical tests wherever required. A regular record of the internal assessment of each candidate shall be maintained by the Principal of the College and sent to the Registrar of the University by the 31st of March at the latest.

*O.238 E-2:* A candidate who, after passing the Pre-University Examination of the University or the Higher Secondary Examination of a recognised Board or any other examination recognised by the University as equivalent thereto, with Physics, Chemistry, Biology or Mathematics has completed a regular course of study at the Regional College of Education, Ajmer or any other college affiliated to the University for the purpose for one academic year will be eligible for admission to the First Year Examination.

*O.238 E-3* Every candidate for the First Year Examination shall be examined in the following subjects :—

*THEORY (Part I)*

- (a) English
- (b) Regional Language
- (c) Engineering Drawing
- (d) Physics
- (e) Chemistry
- (f) Biology or Mathematics.

*PRACTICAL (Part II)*

- (a) Physics
- (b) Chemistry
- (c) Biology (for those who opt for Biology)  
(2 practicals—One in Botany and one in Zoology.)

*O.238 E-4:* A candidate who after passing the First Year Examination of the Course has completed a regular course of study at the Regional College of Education, Ajmer or any other College perusing the same course affiliated to the University for the purpose for one academic year will be eligible for admission to the Second Year Examination.

*O.238 E-5:* Every candidate for the Second Year Examination shall be examined in the following subjects :

*(THEORY Part I)*

- (a) Psychological Foundation of education.
- (b) Methods of teaching Science
- (c) Any one of the following combinations :  
Physics, Chemistry and Mathematics

Or

Chemistry, Zoology and Botany

*PRACTICAL (Part II)*

- (a) Physics and Chemistry

Or

- (b) Chemistry, Zoology and Botany.

*O.238 E-6:* A candidate who after passing the Second Year Examination of the course has attended a regular course of study at the Regional College of Education Ajmer or any other college persuing the same course affiliated to the University for the purpose for one academic year shall be eligible for admission to the Third Year Examination.

O.238 E-7: Every candidate for the Third Year Examination of the Course shall be examined in the following subjects.

*THEORY (Part I)*

- (a) Workshop in Teaching
- (b) One of the following combinations :  
     Physics, Chemistry and Mathematics  
         Or  
     Chemistry, Zoology and Botany.

*(PRACTICAL Part II)*

- (a) Workshop Practice        )   For Mathematics  
     Physics                    )       Group  
     Chemistry                 )
- (b) Agriculture                )   For Biology  
     Chemistry                 )       Group  
     Zoology                    )  
     Botany                     )

N.B. 1: Though the examination in the subjects of Workshop Practice and Agriculture will be held at the end of the Third Year, yet the teaching in these subjects shall start in the Second Year.

- 2. Candidates will have to offer any one of the following three groups of Agriculture (Practical) :—
  - (i) Plant Protection and Poultry Production.
  - (ii) Vegetable Production & floriculture and Fruit plant propagation and Nursury raising.
  - (iii) Manures and Fertilizers, soil testing etc. etc.

O.238 E-8: A candidate who after passing the Third Year Examination of the course has attended a regular course of study at the Regional College of Education, Ajmer or any other college persuing the same

course affiliated to the University for the purpose for one academic year will be eligible for admission to the Fourth Year Examination.

O.238 E-9: Every candidate for the fourth year Examination of the course shall be examined in the following subjects :

A. *THEORY (Part I)*

- (a) Workshop in Teaching
- (b) Foundations & Problems of Education
- (c) Applied Sciences—one of the following
  - (i) Agriculture Appliances for Maths.  
Physics & Chemistry Hons. students.
  - (ii) Electronics for Physics and Math. (Hons.)
  - (iii) Production processes for Physics and Maths.  
Hons.
  - (iv) Ceramics for Chemistry (Hons.)
  - (v) Fruit & Seed production & fruit preservation  
for Botany Hons.
  - (vi) Bee-keeping and Cattle management for Zoology (Hons.)
  - (vii) Milk products & milk testing for Chemistry  
Hons.
- (d) Honours subject—one of the following :
  - Mathematics
  - Physics
  - Chemistry
  - Botany
  - Zoology

B. *PRACTICAL (Part II)*

- (a) Applied Sciences—As in Theory at (c) above.

(b) Honours subject—one of the following :

Physics  
Chemistry  
Botany  
Zoology.

### C. INTERNSHIP TEACHING

*O.238 E-10:* For a pass at any examination a candidate shall be required to secure at least 36% marks in a subject both in its Theoretical and Practical parts separately. He will also be required to pass separately in Internal and External Assessment, minimum pass marks being 36%. Besides, a candidate shall also be required to pass in Internship Teaching separately (minimum pass marks being 36%.)

Division will be awarded to a successful candidate at the end of the Fourth Year Examination, and the following aggregate of marks will be taken into consideration for the purpose :

20% of the aggregate in the First Year.  
30% of the aggregate in the Second Year.  
100% of the aggregate in the Third Year.  
100% of the aggregate In the Fourth Year.

Separate division shall be awarded for Internship Teaching.

Successful candidates will be classified into three division as under :

First Division	60% or more
Second Division	48% or more but less than 60%
Third division	36%, or more but less than 48%,

Successful candidates securing 50% or more marks in the Honours subject at the Fourth Year Examination shall be awarded the degree of B.Sc. (Hons.) B.Ed. and those securing less than 50% marks in the Honours subject shall be awarded the degree of B.Sc. (Pass) B.Ed.

*O.238E-11:* There shall be in the month of August a supplementary examination for the First, Second, Third and Fourth Year Examinations. A candidate who passes in the Internal Assessment and also in Internship Teaching in the case of the Fourth Year but fails in the External Assessment of Theory and/or Practical of not more than two subjects shall be eligible to appear at the supplementary examination in the subject (s) in which he fails. In case a candidate is not able to pass even at the supplementary examination he shall be required to appear in all the subjects again as an ex-student or a regular student. Such candidates shall, however, not be allowed to appear at more than two subsequent examinations.

A candidate who fails in the Practical Part at the Main Examination shall be required to appear in corresponding Theory part also at the supplementary examination. A candidate who passes in the Practical Part but fails in the Theory part of a subject at the Main Examination shall not be required to appear again in the Practical Part at the supplementary examination. The marks of Internal Assessment at the Main Examination shall be carried over for the purpose of supplementary Examination.

Candidates passing at the supplementary examination either in the First Year and/or in the Second, Third and Fourth Year examinations shall not be awarded any division and they will be declared to have obtained a pass class. The



minimum pass marks for the supplementary examination shall be the same as prescribed for the Main Examination.

0.238 E-12 : Notwithstanding anything contained in the above Ordinances, Honours Degree shall not be awarded to a candidate who clears the Fourth Year Examination in more than two attempts, but he will be awarded B. Sc. (Pass) B. Ed. degree.

R-17-B.1 :

SCHEME OF EXAMINATION  
BACHELOR OF SCIENCE (PASS/HONOURS)  
AND BACHELOR OF EDUCATION

(Four Year Course)

*FIRST YEAR*

*Theory (Part I)*

	Max. Marks.			Duration
	Int.	Ext.	Total	
1. English—One Paper	20	80	100	3 Hours.
2. Regional Language (Hindi)—One Paper	20	80	100	3 Hours.
3. Engineering Drawing— One Paper.	20	80	100	3 Hours.
4. Physics: Paper I	10	40	50	3 Hours.
Paper II	10	40	50	3 Hours.
5. Chemistry: Paper I	10	40	50	3 Hours.
Paper II	10	40	50	3 Hours.
6. Mathematics: Paper I	15	60	75	3 Hours.
Paper II	15	60	75	3 Hours.
7. Biology—Paper I (Botany)	10	40	50	3 Hours.
Paper II (Zoology)	10	40	50	3 Hours.

*Practical ( Part II )*

8. Physics	10	40	50	4 Hours.
9. Chemistry	10	40	50	6 Hours.
10. Botany	5	20	25	3 Hours.
11. Zoology	5	20	25	3 Hours.

*Second Year**Theory ( Part I )*

1. Psychological Foundations of Education— One Paper	20	80	100	3 Hours.
2. Methods of Teaching Science —One Paper	20	80	100	3 Hours.
3. Physics—Paper I	10	40	50	3 Hours.
Paper II	10	40	50	3 Hours.
4. Chemistry Paper I (In—Organic)	7	27	34	3 Hours.
Paper II (Organic)	7	26	33	3 Hours.
Paper III (Physical)	6	27	33	3 Hours.
5. Mathematics—Paper I	10	40	50	3 Hours.
Paper II	10	40	50	3 Hours.
Paper III	10	40	50	3 Hours.
6. Botany—Paper I	10	40	50	3 Hours.
Paper II	10	40	50	3 Hours.
7. Zoology—Paper I	10	40	50	3 Hours.
Paper II	10	40	50	3 Hours.

*Practical ( Part II )*

8. Physics	10	40	50	5 Hours.
9. Chemistry	10	40	50	6 Hours.
10. Botany	10	40	50	4 Hours.
11. Zoology	10	40	50	6 Hours.

*Third Year**Theory ( Part I )*

1. Workshop in Teaching— One Paper	10	40	50	3 Hours.
2. Physics—Paper I	10	40	50	3 Hours.
Paper II	10	40	50	3 Hours.
3. Chemistry—Paper I	7	27	34	3 Hours.
(Inorganic)				
Paper II	7	26	33	3 Hours.
(Organic)				
Paper III	6	27	33	3 Hours.
(Physical)				
4. Mathematics—Paper I	10	40	50	3 Hours.
Paper II	10	40	50	3 Hours.
Paper III	10	40	50	3 Hours.
5. Botany—Paper I	10	40	50	3 Hours.
Paper II	10	40	50	3 Hours.
6. Zoology—Paper I	10	40	50	3 Hours.
Paper II	10	40	50	3 Hours.

*Practical ( Part II )*

7. Workshop Practice	20	80	100	4 Hours.
8. Agriculture	20	80	100	6 Hours.
9. Physics	10	40	50	5 Hours.
10. Chemistry	10	40	50	10 Hours.
11. Zoology Practical I	10	40	50	5 Hours.
12. Botany	10	40	50	6 Hours.

*Fourth Year**Theory ( Part I )*

1. Workshop in Teaching —One Paper	10	40	50	3 Hours.
2. Foundations and Prob- lems of Education—One Paper	20	80	100	3 Hours.

3. Agriculture Appliances	20	80	100	3 Hours.
Electronics/Production Processes				
Ceramics/Fruit & Seed Production				
& Fruit Preservation/Bee Keeping & Cattle				
Management/Milk products & Milk				
Testing—One Paper				

#### 4. *Honours Subject*

(a) Physics—Paper I	20	80	100	3 Hours.
Paper II	20	80	100	3 Hours.
(b) Chemistry—Paper I	14	53	67	3 Hours.
(Inorganic)				
Paper II	13	53	66	3 Hours.
(Organic)				
Paper III	13	54	67	3 Hours.
(Physical)				
(c) Mathematics—Paper I	20	80	100	3 Hours.
Paper II	20	80	100	3 Hours.
Paper III	20	80	100	3 Hours.
(d) Botany—Paper I	20	80	100	3 Hours.
Paper II	20	80	100	3 Hours.
(e) Zoology—Paper I	20	80	100	3 Hours.
Paper II	20	80	100	3 Hours.

#### *Practical (Paper II)*

5. Agriculture Appliances/	20	80	100	3 Hours
Electronics/Production Processes				
Ceramics/Fruit & Seed Production				
& Fruit Preservation				
Bee-Keeping & Cattle				
management/Milk-Products & Milk testing				
6. Physics	20	80	100	6 Hours

7. Chemistry	20	80	100	10 Hours
8. Botany	20	80	100	6 Hours.
9. Zoology—Practical I	20	80	100	6 Hours.
Practical II (Bee-keeping & Cattle management.)	20	80	100	6 Hours.
Internship in Teaching	300	—	300	--

(20) The Faculty considered the following recommendations made by the Board of Studies in Physics at its meeting held on 14th Sept, 1970 :

*No. Summary of the recommendation.*

14. Separate Internal Examiners be appointed for M.Sc. (Prev.) and M.Sc. (Final) Examinations and Full remuneration be paid to each examiner separately.
15. The Elementary Mathematics paper be made compulsory for the students of the First Year T.D.C.(Sc.) offering Biology group.
17. The students possessing the B.Tech.Ed. degree of the University be considered eligible for admission to M.Sc. Physics.
19. Ex-students in M.Sc. who have already passed in Practicals be giving the option of retaining their practical marks and need not be required to appear again in the Practicals.

*Resolved to recommended as follows :*

*(I) (Ref. Recommendation No. 14*

The Recommendation be accepted for M.Sc. examination in all the subjects.

*(II) (Ref : Recommendation No. 15*

It be not accepted.

*(III) Ref: Recommendation No. 17*

The recommendation be accepted and consequently the following amendment be made to 0.234 of the University Hand Book Pt. II.

0.234—Add the following sentence to Note (2).

“A candidate who successfully completes the B. Tech.Ed. Course of this University be considered eligible for admission to the M.Sc. course in Physics.

*(IV) Ref:—Recommendation No. 19 :*

The Faculty observed that since under Note No. (2) to 0.163 a candidate who failed at the M.Sc. (Prev./Final) examination in one or more theory papers but passed in all the practicals had already got the option to re-appear as an-ex-student in theory papers only, no change was needed to be made.

(21) The Faculty considered the recommendations made by the following Boards of Studies/Committees of Courses at their meeting held in September/October, 1970 and January, 1971 regarding the courses of study and Text-books, together with the additions and/or alterations in the Ordinances and Regulations for the various examinations in the Faculty viz., M.Sc. (Priv. & Final) Examination of 1972 and 1973 Pre-University (Sc.) Examination 1972, First Year Examination of 1972, Second Year Examination of 1973 and final Year Examination of 1974 of the T.D.C. scheme B.Sc. (Hon.) Part I Examination of 1973 and Part II Examination of 1974, Pre-University (Agr.) Examination of 1972 and Pre-Professional (Agr.) Examination of 1972, B.Sc. (Ag.) Part I, II and III Examinations of 1972, 1973 and 1974 respectively, B. Sc. (Home Science) and One year Post B.Sc. Diploma Course Examinations as given in their resolutions noted against each :

<i>Name of the Board</i>	<i>Res. No.</i>	<i>Vide Appendix</i>
Botaney & Zoology	5 & 6	III

Zoology	5 & 6	IV
Geology	4	V
Chemistry	4 & 12	VI
Physics	4 & 13	VII
Mathematics	4, 15, 16 & 17	VIII
Botany	4, 9 & 11	IX
Statistics	9	X
Agriculture	4	XI of meeting dt. 22.9.70
		XII of meeting dt. 16.1.1971
Geography	4	With Faculty of Arts
English	4	—do—
Hindi	—	—do—

In this connection the Faculty also considered the recommendations made by the members of the Faculty who are teachers in Mathematics, at their meeting held on 7th February, 1971 (*vide Appendix XIII*).

Resolved to recommend that the aforesaid recommendations made by the Boards of Studies/Committees of Courses as also the meeting of the Mathematics teachers, be approved with the following modifications/observations :

- (I) *Ref: Recommendation No. 6 of the joint meeting of the Boards of Studies in Botany & Zoology and recommendation No. 6 of the B.O.S. in Zoology.*

The Convener, Board of Studies in Zoology be authorised to suitably incorporate in the syllabus the decision regarding (a) substitution of 'Rat' for 'Frog' and (b) introduction of museum specimens and microscopic preparation of the invertibrate type in the course for Zoology practical of the Second Year T.D.C. (Sc.) Examination.

(B) The Scheme of examination for Pre-University (Sc.) Biology be *re-written* as follows: (*Ref* : page 13 and 55 of the 1970 edition of the syllabus) :

	Max. Marks.	Min.Pass Marks.	Duration.
Paper I Botany (Theory)	50 )	33	3 hours
	)		
Paper II- Zoology (Theory)	50 )		3 hours
<i>Practical—</i>			
One paper for both Botany & Zoology	50 (25 for Botany & 25 for Zoology).	17	4 hours

(II) *Ref. Recommendation No. 4 of the Board of Studies in Geology :*

Status-quo be maintained with regard to the Geological Tours.

(III) The following Committee be appointed to suggest the mode for Viva-Voce examination for the M. A./M.Sc./Final examination in *Mathematics*.

- (1) Dr. G.C. Patni (Convener)
- (2) Shri R.C. Gour.
- (3) Dr. N.D. Gautam.
- (4) Shri S.S. Lal Mathur.
- (5) Dr. M.C. Gupta.

(IV) *Ref. Recommendation No. 4 of the Board of Studies in Agriculture and further Reference to Appendix—‘A’ to the minutes of the Board:*

•Computation of ration for cattle on T. D. N. basis be added in the practical course for B. Sc. (Ag) Pt. II examination as recommended by the Board w.e.f. the examinations of 1971 and the examiner concerned be informed accordingly.’



It was clarified by the members representing the subject of Agriculture that this item was already being taken care of in the teaching programme in the college and, therefore, no circular was necessary to be sent to the college.

- (V) *Ref. Recommendation No. 9 of the Board of Studies in Statistics.*

The existing courses be repeated.

- (VI) The course of study in the subjects of English, Hindi and Geography be the same as recommended by the Faculty of Arts.

The meeting ended at 4.45 p.m. with a vote of thanks to the Chair.

Sd/P.N. Mathur

Dean.

## APPENDIX I

(Ref.: Res. No. 14 of Faculty of Science dated 8-2-71)

Syllabus for special papers in Cell Biology for M.Sc.  
Final 1972.

### Paper III

1. Concept of cell and cell theory.
2. Cell types : Detailed structure of the different types of cells e.g. Nerve cell, muscle cell, germ cell, gland cells, blood cells etc.
3. Cell Membrane : (a) Detailed molecular structure and specialized modifications.  
(b) Concept of cell surface.  
(c) Properties and functions of cell membrane with stress on permeability.
4. Cytoplasm: (a) Generalized structure and composition of the cytoplasm.  
(b) Detailed discussion of the cytoplasmic components with special stress on the biochemical and physiological aspects of the following :—  
(i) Endoplasmic reticulum  
(ii) Ribosomes  
(iii) Golgi body  
(iv) Mitochondria  
(v) Lysosomes  
(vi) Centrosome  
(vii) Ergastic substances.
5. Specialized functions of the cytoplasmic components with stress on the molecular mechanisms e.g., contractibility, conductivity, secretion, phagocytosis, pinocytosis etc.
6. Cell and tissue culture : Principal, methodology and significance of the techniques.
7. Chemical basis of fixation and staining and discussion of some of the modern cytological and biochemical techniques for example :—  
(a) Freeze substitution  
(b) Freeze drying  
(c) Fresh and fixed frozen sections

- (d) Intra vital & supra vital staining
- (e) Microincineration
- (f) Important his to cytochemical techniques.
- (g) Centrifugation and ultrecentrifugation.
- (h) Chromatography
- (i) Electrophoresis
- (j) Cell Electrophoresis.

8. Principal and theory of microscopy.

- (i) Phase contract microscopy
- (ii) Interference microscopy
- (iii) Polarizing microscopy
- (iv) Fluorescence microscopy
- (v) Electron microscopy.

Paper IV

1. Nucleus : (a) Structure and functions of unclear envelope.
  - (b) Structure and chemical organization of the resting nucleus.
  - (c) Nucleolus and Nucleolar extrusions.
  - (d) Chemistry and biosynthesis of nucleic acids.
2. Chromosomes :
  - (a) Different types of chromosomes and their structural chemical and functional organization.
  - (b) Chromosomal abberation.
  - (c) Variation and evolution of chromosome numbers.
3. Cell division :
  - (a) Detailed structural, chemical and physiological accounts of mitotic and meiotic divisions with special reference to the mechanism of chromosome movement and organization of the spindle apparatus.
  - (b) Action of mitotic poisons.
  - (c) Polyploidy
  - (d) Polysomy.

4. Gametogenesis :

- (a) Cytological, cytochemical and endocrinological studies on the developing male and female germ cells.
- (b) Physiology of ovum and spermatozoan.
- (c) Physiology of the union of gametes and the acrosome reaction.

- 5. A general account of the effect of ionizing radiation at cellular level.
- 6. Generalized account of the mechanism of cell aggregation during development and *in-vitro* studies.
- 7. Mechanism of the synthesis of the following enzymes in cells :
  - (a) ATP ase
  - (b) Succinic dehydrogenase.
  - (c) Acid and alkaline phosphatases.
  - (d) Hyaluronidase.
- 8. Elementary ideas of cellular origin of disease.
  - (a) Epilepsy
  - (b) Cancer
  - (c) Lipidoses
  - (d) Glycogen storage disease
  - (e) Aging.

*Cell Biology Practical based on Papers III and IV.*

- 1. Use of different fixatives and staining techniques to demonstrate the cytoplasmic and the nuclear inclusions.
- 2. Cytochemical methods to demonstrate the Lipids, proteins, carbohydrates and enzymes.
- 3. Contrifugation and separation of cellular components and their identification.
- 4. Elementary biochemical methods to estimate lipids, carbohydrates and proteins.
- 5. Handling of available equipment for cell Biology.

Note : Exercises should be devised in a manner to cover the above topics. A detailed list of the work done should be made available at the time of practical examination.

*Books recommended :*

1. Cell Function —L.L. Langley  
Affiliated East-West Press  
Pvt. Ltd. New Delhi (1969).
2. Cell Biology —D.P. De Robertis. W.W.  
Nowinski & F.A. Seez W.B.  
Saunders (1965) or later  
edition.
3. Cytology and Cell Physiology —G.H. Bourne.  
Academic press. (1964)
4. Histochemistry, theoretical & Applied vols. I & II. —A.G.E. Pearse  
J & A Churchill (1968 & 1970)
5. The Cell, vols. I-VI —J. Brachet & A.E. Miskey,  
Academic press.
6. Practical Physiological Chemistry —Hawk, Osar & Summerson  
Mc. Graw Hill (1948)
7. Enzyme cytology —D.B. Roodyn, Academic  
press, (1967)
8. The Mitotic cycle —Arthur Hughes  
Butterworths (1951).
9. Cell Physiology —Arthur C. Giese  
Saunders, (1960).
10. Cell in Development & Heredity —E.B. Wilson, 3rd Edn.  
Mc. Millon, (1927).
11. Animal cytology & Evolution —M.J.D. White. Cambridge  
Univ. press, (1959).
12. Developmental cytology —Ed. Dorothea Rudnick  
The Ronald press, (1959).
13. Fine structure of cells —I.U.E.S. Publications,  
Paris, (1955).
14. Frontiers in Cytology —Ed. Sanford L. Palay. Yale  
University Press, (1958).
15. Cell & Tissue culture —John Paul.  
Livingston (1960)
16. Analytical cytology —Ed. R.C. Mellors,  
Mc. Graw Hill, (1959).
17. Biochemical Cytology —Jean Brachet  
Academic press (1957).

18. The organization of cells—L.E.R. Picken  
and other organization. Clarendon Press, (1960).
19. International Review of —All vols. Ed. G.H. Bourne  
cytology & J.F. Danielli, Academic  
press.
20. Formation and fate of —Ed. K.B. Warren,  
Cell Organelles Academic press, 1967.
21. Fertilization —Ed. C.B. Matz & Alberto  
Mon roy, vols. I & II Acade-  
mic Press (1967 & 1970).
22. Enzyme Histochemistry —M.S. Burstone  
and its application in  
the study of neoplasm. Academic press (1962).

## APPENDIX II

(Ref. Res. No. 19 dated 8-2-1971 of the Faculty of Science.)

PROPOSED SYLLABUS FOR FOUR YEAR SCIENCE  
COURSE B.SC. AND B.SC. HONS. B.ED. IN ZOOLOGY  
(AGRICULTURE VOCATIONAL SUBJECT)

Marks : Total	50
Internal	10
External	40

III-YEAR (PLANT PROTECTION)  
PRACTICAL EXAMINATION ONLY.

- Unit 1 What is plant protection—Principles of plant protection.
- Unit 2 Broad classification of insects and pests (Entomological.)
- Unit 3 Important stages in the life cycle of major insect pests when they cause maximum damage and when they can be best controlled.
- Unit 4 Classification of Insecticides and their application methods.
- Unit 5 Plant protection equipment, their handling, care and maintenance.
- Unit 6 Identification of important insect pests of some major crops and vegetable and their control measures.
- Unit 7 Skills and abilities to be developed.
- (a) Proper handling of Insecticides, fungicides-precautions.
  - (b) Preparation of suitable solution, emulsions mixtures etc. for applications.
  - (c) Practice in spraying, dusting and fumigation.
- Unit 8 (i) Store-grain pests and their control measures.  
(ii) Rodent control and rodenticides.
- Unit 9 (i) Important fungus, virus, bacterial diseases of some major food and vegetable crops, their symptoms and control measures.  
(ii) Seed treatment and soil treatment.

- Unit 10 (a) Identification of some major Kharif-Rabi and Zaid seasonal weeds and their classification.
- (b) Control measures against weeds—Chemical and mechanical.

This examination is for all students taking Zoology as one of the subjects. The examination shall be held at the end of 3<sup>rd</sup> year.

This course is in place of workshop practice and therefore students opting for this subject shall not study workshop practice.

There shall be only one practical examination of 6 hours duration at the end of 3<sup>rd</sup> year for the Zoology Vocational subjects viz., Plant Protection and Poultry Production.

If the internal examiner of the above practical examination is a person of Plant Protection then the external examiner shall be the person of Poultry Production and vice-versa.



FOUR YEAR SCIENCE COURSE B. Sc. (HONS.)/  
B.Sc. B.Ed. IN ZOOLOGY  
(AGRICULTURE VOCATIONAL SUBJECT)

	Marks : Total	50
III-YEAR—POULTRY PRODUCTION	Internal	10
(Practical Examination only)	External	40

Unit 1 Needs and scope for expansion of poultry industry.

Unit 2 Pre-requisites for a successful poultry enterprise.

- (a) Suitable location
- (b) Cost to start
- (c) Size of poultry farm
- (d) Choosing a suitable breed
- (e) Know-how of the job of business.

Unit 3 Steps in starting a poultry enterprise.

- A. (a) Deciding the system of raising (Range versus confinement).
- (b) Identifying the materials and cost of construction of a suitable poultry house.
- (c) Equipment and appliances required to run a poultry farm, their cost and source.
- B. (a) Raising of poultry birds for (i) Egg production  
(ii) Meat production
- (b) Rearing of : (i) Day old chicks (ii) Growers (iii) Layers.
- (c) Feeds and feeding of day old chicks, growers and layers.
- (d) Symptoms and preventive and curative measures of poultry diseases.

Unit 4 Skill in handling poultry flock.

- (1) Identification of important breeds of poultry.
- (2) Rearing of day old chicks in brooder.
- (3) Inulation against Ranlkhet, Fowl-pox and other diseases.
- (4) De-beaking.
- (5) Fixing feeders, waterers and other equipment in a poultry house.
- (6) Selection and management of litters.

- (7) Cleaning of poultry house including feeders. waterers etc.
- (8) Mixing of feed for day old growers, layers and broilers.
- (9) Culling of poultry birds.
- (10) Identifying broody and sick birds.
- (11) Administration of medicines through feeds and water.
- (12) Care and management against insects and pests.
- (13) Collecting, cleaning, grading and marketing of eggs.

Unit 5 Planning, organizing and conducting home and school projects in poultry.

Unit 6 Practice in Record keeping and calculating the cost of production of eggs per dozen,

This examination is for all students taking Zoology as one of the subjects.

This course is in place of workshop practice and therefore students opting for this subject shall not study workshop practice.

THE PROPOSED SYLLABUS FOR FOUR YEAR  
SCIENCE COURS B.Sc. AND B.Sc. (HONS.) B.Ed.  
IN BOTANY-AGRICULTURE VOCATIONAL.

Marks : Total 50

III-YEAR

Internal 10

Practical Examination only

External 40

*Vegetable Production*

Unit 1 Importance of vegetables in human diet.

Unit 2 Classification of vegetables.

Unit 3 Choosing suitable vegetables in relation to soil and climatic conditions.

Unit 4 (a) Selection of site for vegetables

A. (b) Principles of layout of vegetable garden including kitchen garden Skills in.

B. (a) Layout of a kitchen garden

(b) Prepration of seed-bed for vegetable nursery

(c) Raising of nursery and Transplanting the seedlings.

Unit 5 Sources of quality inputs and selection of appropriate tools for vegetable production.

Untt 6 A. Broad principles of vegetable production.

B. Skills and abilities in care and management.

(a) Planting seeds

(b) Placement of manures and fertilizers

(c) Inter-culture operations

(d) Irrigation

(e) Plant protection measures.

(f) Harvesting and storing and collection of seeds.

Unit 7 (A) Approved practices of vegetable production with special reference to some major vegetables of the are ;

(a) Summer season (Zaid)

(b) Rainy season (Kharif)

(c) Winter season (Rabi)

(B) Organising, planning and conducting;

(a) School garden projects

(b) Home projects;

Unit 8 (a) Principles of record keeping

- (b) Skills in keeping up to date records and calculating the cost of production.

This examination is for all students taking Botany as one of the subjects. The examination shall be held at the end of 3rd year. This course is in place of workshop practice and therefore students opting for this subject shall not study workshop practice.

There shall be only one practical examination of 6 hours duration at the end of 3rd year for the Botany Vocational subjects. viz. Vegetable Production and Floriculture and Fruit Plant Propagation and Nursery Raising.

If the internal examiner of the above practical examination is a person of vegetable production then the external examiner shall be the person of Floriculture and Fruit Plant Propagation and Nursery Raising vice-versa.

THE PURPOSE SYLLABUS FOR FOUR YEAR  
COURSE B./B.Sc. HONS. B.Ed. BOTANY  
(AGRICULTURE VOCATIONAL SUBJECT)

	Marks : Total	50
	Internal	10
III-YEAR (Floriculture and Fruit	External	40
Plant propagation and Nursery Raising)		

*FLORICULTURE*

Unit 1 Ability to identify :

- (a) Seasonal, annual and perennial flowering herbs and shrubs, creepers etc.
- (b) Suitable hedges for various purposes.
- (c) A venue trees.

Unit 2 Principles of layout of Ornamental garden with special reference to school and home beautification.

Unit 3 A—Principles of planning and selecting of plants,

- (a) Seasonal flower plants.
- (b) Hedge, creepers shrubs etc.
- (c) A venue trees for school and home beautification.

B—Skills in :

- (a) Pot filling and transplanting
- (b) Layout of school garden/home garden
- (c) Planting of hedges, creepers and seasonal flowers
- (d) Up-keep and maintenance of garden
- (e) Fruning of hedges, herbs and training shrubs and trees.
- (f) Filling pits for planting, annual and perennials etc.

Unit 4 A—Establishment of lawns.

- (a) Layout
- (b) Care and maintenance

B—Skills in developing and maintenance of lawns.

- (a) Preparation of bed
- (b) Planting lawns by various methods
- (c) Use of lawns mowers.

Unit 5 Sources of quality inputs such as :

- (a) Seeds
- (b) Seedling and
- (c) Selection of appropriate tools for garden

Unit 6 A—Principles of raising nursery and vegetative propagation of fruits and ornamental plants.

B—Layout of nursery

- (a) Selection of suitable varieties of mother plants and their planting.
- (b) Practising propagation of plants by :
  - (a) Cutting (b) Budding (c) Granting layering etc.
- (c) Use of hormones in regulating fruit plant growth.

Unit 7 Follow up of student garden and home projects.

(Unit No. 7B of practicals course—Vegetable production).

This examination is for all students taking Botany as one of the subject.

This course is in place of workshop practice and therefore students opting for this subject shall not study workshop practice.

## FOUR YEAR SCIENCE COURSE

## Practical

(Examination at the end of third year)

WORKSHOP PRACTICE (For Physics, Chemistry and  
Mathematics students)SUBJECT : *Second Year*

To the extent possible, instructions will be integrated

*Theory & Practice*

## I. WOOD WORK :

*Lectures* : Shop safety and accident Prevention, electric shock and their treatment.*Timber* : Classification of Indian timbers and their characteristics, Seasoning, conversion, defects in timber and method of preservation, measuring system and simple calculation of wood work projects.*Hand tools* : for wood working, their specifications uses, and methods of sharpening cutting edges of tools, wood joints, gluing materials and simple treatment for hardwares used in wood work and wood finishing materials. *Wood Working Machine* : Description and function of machines such as circular saw, Bend saw, surface planner, joint Wood Lathe, Scroll Saw, radial arm saw, sanders. Study of portable wood working tools—Router, drill, sander, grinder etc.*Practice* : Projects to be introduced involving operation skill (such as Cutting, measuring planning, rounding, drilling, fret work, filling) with hand tools. Grinding of chisels planes and other cutting tools, Saw setting and sharpening.

Practice in design of simple projects, involving uses of various joints such a Book rack, tea poy, side table, dressing tal etc. Turning between centres and face plate on Wood lathe.

Practice involving use of various wood working machines and portable tools.

## I. BENCH WORK :

*Lectures* : Measuring tools, Common Bench and Hand tools, layout tools and practice, Precision gauges. Limits and tolerances, their use in precision manufacture. Cold chiselling, filing, tapping and die work, Scrapping Polishing, Study of tools used in scrapping and polishing.

*Practice* : Measuring practice, making and Layout work, chipping flat surfaces. Key ways, filing, drilling, scrapping, Drilling with Bench drill, Heavy Drill and Radial drill press. Hand tapping and also practice on machine tapping. Assembly practice using various locking devices and fasteners.

## III. FORGING AND WELDING :

*Lecture* : Smithy operations, Black smithy forges, Hand tools, Hot and Cold forging, Forging on Power press and drop stamping operations.

Simple treatment to hot and cold manipulative processes for heat treatment such as, Hardening, tempering, Case hardening, Annealing, Normalising. Nitriding, cyaniding etc. Tempering and Hardening of cutting tools used in metal shop and workshop practice.

Study of tools and equipments used in joining by hard soldering Simple Brazing. Simple Forge welding method. Brief study of Welding Processes (Both Elect. Arc and Gas welding). Tools and equipment used in welding and brazing practice welding materials such as, Electrodes, flux and commercial grading of such items.

*Practice* : Practice on Soldering, Brazing, Projects to be made involving both gas and electric and welding practice.

Blacksmithy forging (cold and hot) so as to involve all forging operations such as Bending, riveting. drawing, upsetting fullering, smith welding, cutting. Practice on hardening,



tempering annealing and normalizing with special reference to harding and tempering of workshop tools.

#### IV. SHEET METAL WORK :

*Lecture :* Hand tools and hand machines-description, uses and care. Development of patterns used in Sheet metal work. Commercial sizes and specifications of raw materials used in practice. Study of common joints and operations.

## Four Year Science Course

SUBJECT : WORKSHOP PRACTICE (For Physics,  
Chemistry and Mathematics students.)

## III YEAR

	Total marks	100
<i>Practical Examination only</i>	Internal	20
	External	80

To the extent possible instructions will be  
integrated Theory & Practice.

## I. MACHINE SHOP PRACTICE

(Turning, Shaping, Milling, Grinding).

*Lectures* : Study of various lathes, shapers, milling and grinding machines—specifications—various lathe operations, *Turning Tool Materials* : tool lay out including use of multi-tool holders and work holding fixtures, methods of multiple thread production.

*Types of Shaper* : drives and feed, return motions, tools, job-holding devices, types of operations.

*Milling Machines* : types, milling operations, indexing and indexing heads, their types, gear cutting methods, tools and cutters for milling machines.

*Grinding machines*—types, types of jobs and finish, grinding wheel forms and materials—specifications, speed and feeds, wheel dressing and balancing, operations on tool and cutter grinders-job holding devices.

*Planner* —Types, operations, work holding devices.

*Practicals* : Exercises involving use of the above machines. Projects should include various ferrous and non-ferrous materials so as to give students fair dexterity of skills on these machine tools.

Practical jobs on milling machine should be confined to simple operations such as plain and side milling, key ways, and straddle milling, gang milling, setting of indexing head, simple indexing such a milling as hexagon, or spur gear cutting.

Grinding practice should involve sharpening of cutting tools such as lathe tools, twist drills, milling cutters, sharpeners and planner tools, dressing a grinding wheel, surface grinding of simple jobs.

## II. GENERAL ELECTRICITY :

*Theory* : Types of electric wires, conductors and insulators, common elect. house and factory wiring, elect. switch board connections, motor starters, earthing, observation of precautions, Radio tube circuit diagram, colour code for resistors. Working of switches of different types, consideration of electric circuit for installing scientific equipment.

### *Practical* :

- (i) Wiring of lamps in series and parallel.
- (ii) Wiring circuits involving single way, two way and intermediate switches, fuses and plugs.
- (iii) Connection of simple, single phase and 3-phase motors with starter.
- (iv) Simple distribution board.
- (v) Wiring circuits in C.T.S. and Casting and capping systems.
- (vi) Soldering practice.
- (vii) Wiring of simple 2 valve transistor radio.

## III. FOUNDRY PRACTICE :

*Lectures* : Brief study of Ferrous and Non-ferrous metals and alloys. Metal shrinkage pattern forms, materials used in pattern making, various pattern maker allowances, core-prints-types of moulds, moulding practices, their merits and demerits, moulding tools, moulding sands, types of moulding furnaces, charging a cupola, crucible furnace fettling, casting defects.

*practice* : Exercises should have simple moulding practice involving use of core and various types of patterns. Casting practice may be given both for Ferrous and non-Ferrous metal casting projects. Some practice should also involve in fettling and checking casting defects for both ferrous and non-ferrous casting projects.

#### IV. GLASS BLOWING :

*Theory* : Advance practice on glass blowing methods and equipments. Fundamental of making glass seals, principles of working with flames and tubes of different diameters. Precautions to be taken while doing glass blowing work.

*Practice* : Flatening a sheet, shearing, bending, seaming and beading practice. Projects using various mechanical joints and rivetting work.

#### GLASS BLOWING :

*Theory* : Study of composition, types and Physical Properties of Glasses. Glass Blowing equipments and other accessories requiring manufacture of glass wares; types of Burner and flames for glass blowing; power tools, Basic operations, identifications of glasses.

*Practice* : Workshop tests for identification of different glasses. Cutting glass tubing with different methods, drawing, rotation method, practice involving preliminary glass blowing operations such as flaring, making points, round bottoming of tubes, making constructions.

FOUR YEAR SCIENCE COURSE B.Sc. (PASS) AND  
B.Sc. (HONS.) B.Ed. HONS. IN CHEMISTRY

II YEAR-MANURES AND FERTILIZER

Practical Examination only

- Unit 1 Importance of Manures and fertilizers in food production.
- Unit 2 Essential elements necessary for plant growth and their source of availability.
- Unit 3 Soil fertility and its relationship with efficient Plant production, maintenance of soil fertility.
- Unit 4 Plant symptoms of nutritional deficiency.
- Unit 5 Classification of Manures; nutrient content of Nitrogenous, Phosphatic and Potassic fertilizers used in food production; elemental expression of nutrients.
- Unit 6 Principles of making compost and Farm Yard Manures (F.Y.M.)
- Unit 7 Principles of green manuring and nitrogen fixation.
- Unit 8 Skills and abilities in :
  - (i) Calculating the amount of fertilizers for food production.
  - (ii) Unit Value of fertilizers.
  - (iii) Timely application of fertilizers by different methods.
  - (iv) Making high quality of F.Y.M. and Compost.
  - (v) Using various green manuring crops for food production.

FOUR YEAR SCIENCE COURSE B.Sc. (PASS) AND  
B.Sc. (HONS.) B.Ed.-HONS IN CHEMISTRY.

III Year—Soil testing, Reclamation and Conservation.

Practical Exam. only

Marks : Total 100

Six hours duration.

Internal 20

External 80

Unit 1 Soil and its properties in relation to plant growth.

Unit 2 Importance of soil testing, reclamation and conservation.

Unit 3 Methods of soil testing.

Unit 4 Causes of formation of acidic saline and alkaline soils, and their effect on plant growth.

Unit 5 Drainage—its relation to conservation and reclamation.

Unit 6 Methods of reclaiming the acidic, saline and alkaline soils.

Unit 7 Soil erosion and its effect on plant growth.

Unit 8 Land capability classes and conservation.

Unit 9 Methods of soil testing.

Unit 10 Skills and abilities in :

(a) Taking soil samples for testing.

(b) Determining the following :

(a) PH (b) Nitrogen (c) Phosphorous (d) Potash  
(e) Moisture.

(c) Deciding the need of fertilizers on the basis of soil test for major crops.

(d) Identifying acidic and alkaline soils.

(e) Reclaiming acidic and alkaline soils through mechanical and chemical methods.

(f) Selecting crops for alkaline and acidic soils.

- (g) Using various methods of drainage in conserving soil.
- (h) Using methods of soil conservation like :
  - (i) Strip cropping.
  - (ii) Contour making.
  - (iii) Levelling and Bunding.
  - (iv) etc. etc.

PROPOSED SYLLABUS FOR THE FOUR YEAR  
SCIENCE COURSE B.Sc HONS. B.Sc. B.Ed.  
IN BOTANY

(AGRICULTURE VOCATIONAL SUBJECT)

*Theory*

Marks : Total	100
Internal	20
External	80

IV YEAR (FRUIT AND SEED PRODUCTION AND  
FRUIT PRESERVATION)

Theory—3 Hours duration

*Fruit production*

Unit 1 Principles of layout of an orchard.

Unit 2 Choosing of suitable fruits for an area.

Unit 3 (a) Board principles of fruit production for commercial purposes.

(b) Approved practices of fruit production with special reference to important fruits of the region  
e.g.

Pappaya, Banana, Ber, Mango, Citrus, Lichi,  
Guava, Grapes, Apples.

*Fruit preservation*

Unit 1 Establishing a fruit preservation laboratory

Unit 2 Principles of fruit and vegetable preservation.

Unit 3 Methods of preserving fruits and vegetables.

Unit 4 Preparation of fruits and vegetable products such as

(a) Squash (b) Cordial (c) Pickles and Chutney (d) Jam  
Jelly.

Unit 5 Canning, botting of the fruitproducts.



*Seed production*

Unit 1 Raising seeds of the following :

Radish, Carrot, Turnip Cauliflower, Bhindi, Tomato, Brinjals, Cabbage, Peas and also of other flower plant seeds.

Unit 2 Importance of quality seed.

Unit 3 Testing of seed for germination, Viability, purity dormancy of seed.

Unit 4 Principles of vegetable seed production and multiplication.

Unit 5 Packing and certification of seed.

*Practicals* : 3 Hours duration External 80, Total Marks 100  
Sectional 20

Unit 1 Follow up of Nursery raising fruit and vegetable propagation and Unit No. 6 A of Floriculture and plant propagation and Nursery raising course (practical).

Unit 2 Skills in :

- (a) layout of an orchard.
- (b) Preparation of beds and pits.
- (c) Placement of manures and fertilizers.
- (d) Making of irrigation channels.
- (e) Fixing the plants in pots according to layout.

Unit 3 Care and maintenance of the orchard :

- (a) Production of plants from : (i) Frost (ii) Hot winds (iii) Stay cattles etc.
- (b) Plant protection measures against insects pests and diseases.

Unit 4 Practice of pruning and training grapes.

Unit 5 Renovation of up-productive orchards/old orchards.

Unit 6 Fruit preservation : Practice in making the following:

- (a) Squashed of fruits grown in the area (b) Cordials.
- (c) Mango chutney and pickles.
- (d) Tomato sauce.

- (e) Jam and Jelly of apple, Gauva, Tomato and other fruits.
- (f) Vegetable dehydration—such as Bhindi, Oauli-flower, Peas etc.
- (g) Sealing, bottling and canning.
- (h) Cost of production.

Unit 7 (i) Seed-raising (Types in theory)

- (iii) Seed-testing (a) Germination & viability
- (b) Purity
- (iii) Packing.

FOUR YEAR SCIENCE COURSE B.Sc. (HONS.)  
 B.Sc. B.Ed. IN ZOOLOGY  
 (AGRICULTURE VECATIONAL SUBJECT)

*Theory*

Marks: Total	100
Internal	20
External	80

IV YEAR (BEEKEEPING AND CATTLE MANAGEMENS)

*Bee-Keeping*

Unit 1 Importance of Bee-keeping.

Unit 2 Species of Honey bee.

Unit 3 Methods of Bee-keeping.

Unit 4 (a) Equipment required for bee-keeping.

(b) Their handling and maintenance.

Unit 5 A : Skills in :

(a) Selection of site for the beehive fixing.

(b) Acquiring bees of appropriate species.

(c) Management-Seasonal-of Honey bees.

(i) Swarms management.

(ii) Management during honey flow.

(iii) Honey extraction.

B. Problems, enemies and Diseases.

*Cattle Management : Cattle, sheep and Goat.*

Unit 1 India's cattle problems and improving the present cattle through breeding and artificial insemination.

Unit 2 Identification of important breeds of

(a) Cow (b) Buffalow (c) Goat (d) Sheep.

Unit 3 (a) Feeds and Feeding : Principles of feeding different animals. Identification of different feeds.

(b) Care and management of :

(i) New born calf (ii) Heifer (iii) Working animal

(iv) Milch-animal (v) Pregnant animal etc.

Unit 4 Importance infectious diseases of cattle : their symptoms and control measures.

Unit 5 Skills and abilities to be developed in :

- (a) Cleaning, disinfecting cattle barns and milking.
- (b) Handling and throwing of animals.
- (c) Formulating balanced rations and mixing.
- (d) Dehorning, cast ration.
- (e) Clean milk production.
- (f) Measuring temperature—pulse rate and treating animal for common ailments.

Unit 6 Principles of planning simple and low cost :

- (a) Dairy housing
- (b) Procurement of equipment required for Dairy.
- (c) Record keeping.

This examination is for all students taking Zoology as one of the Subjects. This course is in place of workshop practice and therefore students opting for this subject shall not study workshop practice.

FOUR YEAR SCIENCE COUSE B.Sc. (HONS.)  
B.Ed. IN ZOOLGOY AGRICULTURE  
VOCATIONAL SUBJECT)

Marks Total	100
Internal	20
External	80

Three Hours duration.

IV YEAR

PRACTICAL EXAMINATION  
BEE KEEPING AND CATTE MANAGEMENT

- Unit 1 Designing the low cost houses for cattle and calculating their bill of material.
- Unit 2 External parts of animals and their identification.
- Unit 3 Judging the age of animals.
- Unit 4 Judging the animals by score card method for various purposes.
- Unit 5 Calculating the weight of an animal.
- Unit 6 Selection of suitable feed material and formulating balanced ration for different purpose animals.
- Unit 7 Identifying physical facilities for establishing a small village dairy unit and estimating the approx-cost.
- Unit 8 Skills and abilities to be developed in :
- (a) Cleaning, disinfecting cattle horns and clean milk production.
  - (b) De-horning and castration.
  - (c) Handling and throwing of animals.
  - (d) Providing exercise to animals.
  - (e) Measuring temp. pulse rate and treating animals for simple ailments.
  - (f) Record keeping and calculating the milk per lactation and cost of production.

Unit 9 Identifying various species of Honey Bees and their characteristics.

Unit 10 Methods of Bee-keeping.

Unit 11 (a) Equipment required for bee-keeping.

(b) Their handling and maintenance.

Unit 12 A : Skills in :

(a) Selection of site for the beehive fixing.

(b) Acquiring bees of appropriate species.

(c) Managment-seasonal-of Honey bees.

( i ) Swarms managment.

( ii ) Management during honey-flow.

(iii) Honey extraction.

B. Problems, Enemies and Diseases.

FOUR YEAR SCIENCE COURSE B.S.C. (HONS.)  
AND B.SC. (PASS) B.ED. IN CHEMISTRY

IV YEAR

MILK PRODUCTS AND MILK TESTING

	Max. Marks	100
THEORY	20	Internal
	80	External

Three Hours duration.

Unit 1 Importance of milk products and its role in country's economy.

Unit 2 Milk-Milk products and their composition.

Unit 3 Principals and procedure in making the following milk products.

- (a) Cream.
- (b) Butter.
- (c) Ghee.
- (d) Cheese.
- (e) Ice-Cream.
- (f) Condensed Milk.
- (g) Milk powder.

Unit 4 Pasturization and standardization of milk.

Unit 5 Equipments and other materials required to make the products : their approx. cost and source of availability, handling and maintenance.

Unit 6 Importance of testing milk and milk products.

Unit 7 Methods of adulteration used in milk and milk products.

	Total marks	100
Practical	External	80
	Internal	20

Three hours duration.

- (a) determining the major constituents of milk.

- (b) making cream, Butter, Ghee, Cheese, Ice-Cream, etc. in the laboratory.
- (c) Packing, storage and marketing of milk products.
- (d) taking milk samples for testing.
- (e) detecting of adulteration in milk by :
  - ( i ) Lactometer.
  - ( ii ) Gerber's centrifugal machine.
  - (iii) Iodine test.
- (f) determining of percentage of fat, solid not fat and acidity in milk.
- (g) Ghee testing.

Unit 8 Methods of detection of adulteration Milk and Milk products.



## 4th YEAR B.Sc. (HONS.) B.Ed.

## THEORY

	Applied Science Group	100
Three hours :	Internal	20
	External	80

## ELECTRONICS

For Physics & Mathematics Student.

Unit 1 : *Vacuum Tubes and their basic characteristics-*

Vacuum tubes and transistors; their characteristics & their general applications.

Unit 2 : *Power Supplies.*

Half wave and full rectifiers. Ripple factor the shunt capacitor filter. The series-inductor filter. The L-Section, or inductor input, filter. The bleeder resistor, Capacitor-input filters. Voltage-multiplying rectifiers. Rectifier circuit design-valve & transistor circuits, voltage regulator(V.R.) tubes A.C. Regulators.

Unit 3 : *Photo electric Devices & applications.*

Light cathode materials, Photoemissive cells. The gas-filled photo tube. The photo-voltaic cell. The photo transistors. Photo tube relays. Photo tube circuits for measurement purposes. Electron multiplier. Photo cell applications.

Unit 4 : *Power Control & Inversion.*

The thyatron. Grid control in thyatron. Phase shift control. Pulse control of thyatrons. The ignitrons. Ignitron firing circuits, ignitron rectifiers. Gas triode counting circuits. Inverters. The Transistor inverter

Unit 5 : *Amplifiers* (Elementary treatment only).

A.F. & R.F. amplifier circuits. Intermediate frequency amplifiers. Multistage R.F. amplifier circuits. Aud.o-

frequency voltage amplifiers. R.C.C. amplifier circuits. T.C. amplifier. Audio-frequency transformers. Cathode coupled amplifier. Feed back amplifiers, their advantages & limitations. Power amplifier circuit. Output transformer. Power output. Push pull amplifier. Valve and transistor circuits.

#### Unit 6 : *Oscillators.*

Hartley, Colpitts & Beat frequency oscillator. H.F. generating devices such as magnetron, cavity resonator, klystron, U.H.F. devices and their uses.

#### Unit 7 : *Communication.*

Amplitude & frequency modulation. Superhet radio receiver principles, The local oscillator. The mixer stage I.F. stage. Detection circuit, volume control. Transistor & valve receivers.

General principles of television Transmission & reception Block circuit diagram. Scanning. C.R.O. time base circuit.

#### Unit 8 : *Relays, Timers & Motor Control*

The contact relay. D.C. operated & A.C. operated time delay relays. Automatic sequence timer. The resistance welding process. Thyatron supply for the D.C. motor. Simple control & speed regulations. Simple idea about first order & second order servo-mechanisms.

Unit 8 : Simple ideas of applications of electronics in; heating and welding, switching circuits, computer arithmetics and comparison system. Temperature control. Elementary ideas about satellite communication, V.T.V.M.

#### *Books Recommended :*

- (1) Essentials of Radio Electronics-Morris Slurzberg-Mc. Graw Hill.
- (2) Engineering Electronics-J.D. Ryder-Mc Graw Hill.
- (3) Radio Electronics-Seely-Mc Graw Hill.
- (4) Industrial Electronics by L.C. Dane, Waterview Publishing.

B.Sc. (Hons.) B.Ed.

PRACTICAL : Examination at the end of fourth year  
Electronics.

Total marks	100
External	80
Internal	20

3 hours duration.

Students will work on the following experiments and they may design their own circuits, fabricate and assemble the experiments for testing purposes.

1. power supply with filters.
2. Voltage regulated power supply.
3. Transistorised power supply.
4. Photo Cell relay mechanism.
5. R.C. amplifier, study of its characteristics.
6. T.C./T.F. amplifier study of its characteristics.
7. Transistorised pulse generator.
8. 2 valve radio receiver assembly.
7. Transistor Radio receiver assembly.
10. Study of I.F.T. tuning methods.
11. Simple measurement with the help of C.R.O.

Two projects (involving design and fabrication) relating to relay/control circuits & measurements etc.

## FOUR YEAR SCIENCE COURSE

## IV YEAR

	Total Marks	100
3 hours duration.	Internal	20
	External	80

## THEORY

*Subject* : PRODUCTION PROCESSES (For Physics & Maths. Hons. Student.)

*Note* :—Projects are to be selected so as to cover the syllabus below :—

*THEORY* :

*Mechanical Working of Metals* :

(Hot and Cold)

*Engineering Materials* :

properties of Ferrous, Non-Ferrous metals and alloys generally used in Production work. Brief study of Electrical and Magnetic materials; ceramics, Plastic materials with reference to their properties for hot and cold manipulation processes.

General considerations in selecting production process. Brief idea of modern mass productions.

*Hot Working processes* :

principal involved in the process; hot rolling-equipments, methods-manufacture of pipes, extrusion process. Forging operations and principales-Drop stamping, Power Hammer Forging, machine Forging; hot pressing, Hot pressure welding.

*Cold Working processes* :

Brief study of the principal involved in the process. Various operations such as Bending, Blanking, Broaching, Burnishing, Coining, Cold Rolling, Crimping, Cut off, Dinking, Drawing, Forming, Extrusion, Punching, riveting, shearing, spinning, swaging, wire drawing etc.

Press work operations, types of production press machines, Drive mechanisms for press. their functions and

specifications. General considerations for Dies and Punch design. Types of Dies, spinning work, Lathe for spinning, tools used for spinning lathe, simple operations for spinning. Rivetting, thread rolling.

### *Power Metallurgy :*

Elements of powder metallurgy, metal powders mixing and blending, briquitting, pressing, sintering, sizing, and post sintering treatments, equipments, application for powdered metal products.

### *plastics :*

Types of plastics, Plastic constituents, characteristics of plastics. Plastic processing—compression moulding, cold moulding closed die Moulding, casting, extrusion, Reinforced plastic moulding Post Forming, Design consideration and practical applications and problem, Laminating, Development of synthetic rubber.

### *Welding Brazing & Soldering :*

Types of welding—Fusion and Pressure welding, Term used, Brazing, Soldering, and welding Effects of welding on properties of products. Welding processes—gas welding, flame characteristic, Resistance welding, Elect Arc welding and applications Brief study of special modern welding processes such as Electron Beam welding, Plasma Arc, Ultrasonic welding, friction welding, Electroslag welding. Welding Joints, types and consideration for practical work Equipments for gas and Electric Arc, electrodes, Simple treatment of soft and Hard soldering practice.

### *Casting processes :*

Types—clay bounded moulds, metal Moulds and Chemical bounded moulds, sand moulding practice, qualities of moulding sand, moulding equipments & patterns, advantages of sand moulding and limitations. Permanent mould castings, Dte castings, slush and investment castings, Plaster Mould castings, melting equipment Brief study of Cupola, crucible furnaces, Air Furnaces, Pot Furnaces, Electric Arc Furnaces, Moulding machines.

*Heat Treatment :*

Principle of Heat Treatment. Heat treatment equipments, Furnaces (brief description and study) Flame Hardening, Application of Hardening, Tempering, Normalising, Annealing, Case Hardening in Workshop practice, with special reference to hardening of cutting tools and machined objects, Flame hardening. Nitriding, Austempering.

*Machining and Machine Tools :*

Machined shapes, surfaces and finishes, metal cutting, cutting tools, and material used, chip formation. coolents and coolant materials, multiple broaching and sawing tools, Drilling tools. Reamers, Taps and Dies, Milling cutters, Grinding wheels, wheel materials.

Machine tools—Lathes and Boring mills, shapers and Planers, Broaches, Saws, Drills. mills, grinders,...Their types, working and specifications.....Holding Devices, (chucks, collects, clamps etc.) Jigs & Fixtures, (Simple treatment in brief, Application of Jigs & Fixtures in mass production. Machine Attachments. Machinning operations.....Brief study.

Transmission of Power—Various power drives. Modern methods. Belt. rope and chain drive, gear drive, gear trains and method of transmission of power through gearing. Advantages and Disadvantages of each system.

*New Techniques production :*

Work Handling in Automatic Machining, Circular indexing, Automatic Tapping and Drilling Machines, Automation. Clad steels process, High Energy Forming, Chemical Milling, Plasma Arc,—Numerical Control methods of machining.

*Inspection & Gauging :*

Inspection Procedures. Organisation of Inspection, quantity of inspection, Process Control charts, quality con-

trol, Principles of measurement, (dimensional references, tolerance). Inspection equipments. Direct and Indirect reading instruments. Micrometar calipers, verniers, since bar, indicating gauges and comparator, Dial Indicator, Electric Gauges, Prenmatic Gauses, Optical comparators, optical flats, fixed gauges, Non-destructive tssting.

*Books for Test :*

- (1) Manufacturing Processes—  
by M.L. Begman.
- (2) Manufacturing Proceeses—  
by S.E. Rusinoff.
- (3) Materials and Processes—  
by J.F. Young.
- (4) Manufacturing Materials and Processes—  
by H.D. Mooe & D.R. Kibbey.

FOURTH YEAR B.Sc. (HONS.) B.Ed.  
PRODUCTION PROCESSES.

	Total Marks	100
Three hours duration.	Internal	20
	External	80

*practicals :*

Practice in the subject should involve laboratory exercises so as to cover up the syllabus. This should include :

- (1) Study of Ferrous and non-ferrous materials—workshop tests.
- (2) Destructive and non destructive test in material testing lab. with simple specimen.
- (3) Study of Layot and Preparation of Factory layout—simple exercise involving all fundamental rules.

- (4) Study of a model or chart of Hot Rolling Process.
- (5) Simple Forging Projects involving Heat treatment.
- (6) Hardening and Tempering of cutting tools such as Lathe tools, Twist Drill, Wood work tools.
- (7) Project work on sheet metal such as Conical objects with Development practice.
- (8) Fabrication of sheet metal projects using various mechanical joints and soldering joints.
- (9) Project on O. B. E. press involving simple Die-operation such as Die for round washers.
- (10) Study of various forms of Plastics.
- (11) Simple Brazing work of casting and also for forge items. (Gas welding only).
- (12) Fabrication of Projects by Arc Welding so as to cover Science apparatus.
- (13) Testing of Weldments (Workshop tests only).
- (14) Moulding Practice of small objects using split pattern, core and core boxes.
- (15) Aluminium casting of small Science kits parts.
- (16) Cast Iron castings of small projects.
- (17) Machining and small projects involving use of various machine tools.
- (18) C.I. Casting and machining of spur gear wheel'
- (19) Testing and Inspection of machine objects with Lay-out tools. (micrometer vernier, sine bar and gauge blocks.)
- (20) Testing and Inspection of projects with a Dial Test Indicator.



*practice* :—

Exercises involving, healing of cracks in glass, drilling of holes, peeling or wiping, glass blowing seals, principal and practice for making T-seals, suck seal, ring seal, insertion seals. Dewar Seal, capillary T-seals, Bending tubes, practice in making some simple projects such as bulbs, flasks (round). sealing thermometer ends, manometers etc.

B. Sc. (HONS.) B. Ed. COURSE  
( "CERAMICS" )

for Chemistry (Hons.) Students.  
Examination at the end of fourth year.

Duration—Three Hours.

THEORY

Total Marks	100
Internal	20
External	80

( principles )

- Unit 1. Ceramics of the past : Brief history of china porcelain; Contemporary European Ceramics; Modern ceramic industries Ceramic and pottery industries in India.
- Unit 2. Ceramics as a school subject : Aims and objectives : materials, tools and machinery; sources of ceramic supplies and equipment; layout for a ceramic workshop in school.
- Unit 3. The Chemistry of ceramic materials : The clay and pottery bodies; recipes for pottery bodies; tests for clay.
- Unit 4. Ceramic calculations : To find a molecular weight of a compound; firing changes in a clay body; firing change in a glaze; the RO. R203, RO2 system; The batch recipe.
- Unit 5. Ceramic glazes and their compositions : Lead glazes; alkaline glazes, porcelain and stoneware glazes; Frit glaze; crackle glazes; Mat glazes; Reduction glazes; Crystalline glazes; Bristol glazes; Luster glazes; salt glazes; slip glazes :
- Unit 6. Colouring pigments and principles of firing.

## PRACTICAL

	Total Marks	100
<i>3 Hours Duration.</i>	External	80
	Internal	20

- Unit 1. Preparing an outline of the object; preparing clay; forming by slab, mould and wheel method; making free hand ceramic sculputre; modelling a figure; flal-coil construction; tube constructions; finishing article before firing.
- Unit 2. Pattern design and decoration : Scale; lance; repitition; variety and contrast; tension; decoration; with clays and slips: Modelled decoration, impressed decoration, incised decoration; slip decoration, Inlay work; slip trainling; slip painting; Graffits.
- Unit 3. Preparing glazes; glazing in the raw-clay state; glazing in the biscuite state; How to glaze: Dip glazing, poured glazes; brushed glazes; sprayed glazes, glaze defects and their remedies.
- Unit 4. Colouring objects with pigments: Preparing black, blue, brown, green, red, tan, and yellow with various colouring obxides; using opacifiers; spined seains; under-glaze colures: overglaze colures; preparation of custers; keeping proper temperature.
- Unit 5. Kiln stacking and firing; Indigenou method of firing and electric Kiln; checkup of an electric kiln before firing; firing cycle; preliminary heating; ceramic pyrometric cones; packing a kiln; packing a 'Biscuit' kiln; packing a soft glaze kiln; packing an over glaze kiln; packing a stone-ware kiln.
- Unit 6. Preparing a series of graded articles: Articles used for decoration purposes; articles in home and industry.

NOTE :—Each student will have to produce atleast 12 quality models in a session in the laboratory indicating their production cost and method of working etc.

*Suggested Books :*

Dora M. Billing to N. : The Technique of Pottery.

Harald Isenstein : Creative Clay Work.

Gena and Mandi : The Craft of Ceratics.

## B. Sc. (HONS.) B.Ed.

Syllabus for the IVth Year (Agriculture appliances)  
Maths, Physics & Chemistry students.

## THEORY FOR B.Sc. (HONS.)

Max. Marks	100
Internal	20
External	80

3 hours duration.

Unit 1. Planning a Farm Work-shop. Physical facilities needed for the shop.

- (a) Lay-out of shop.
- (b) Physical facilities including tools and machines in different arease.

Unit 2. Operation of Farm equipment.

- (a) Elementary ideas of working or Diesel Engines.
- (b) Operation principles of Tractors,
- (c) Equipment for differet agricultural operation and their working.
- (d) Working of pumps.
- (e) Elementary ideas for laying pipes.

Unit 3. Fabrication of simple Farm devices such as feeders, feeding throughs, waterer etc. Elementary principles of design.

Unit 4. Simple ideas regarding Dairy and Poultry Farm equipment, The working principles and lay out.

Unit 5. Principles of working Electrical Motors and other electrical appratus/equipment.

Unit 6. Safety Rules and Regulations required for operation and maintenance of Farm appliances.

## B.Sc. (HONS.) B.Ed.

Syllabus for the IVth Year (Agriculture Appliances)  
B.Ed.—Maths. & Physics students.

## PRACTICAL FORE B.Sc. (HONS.)

Max. Marks	100
Internal	20
External	80

*practical* :—Jobs, skills and abilities to be developed.

## Unit 1:

Use, care and maintenance of the following tool and equipments.

- (a) Carpentry tools.
- (b) Black Smithy tools.
- (c) Sharpening tools.
- (d) Cutting and drilling tools.
- (e) Tools for handling electricity.
- (f) Welding equipments.

## Unit 2:

Use, care and maintenance of the important agricultural implements—their assembling and dismoulding.

(I) *Farm Implements* :

- (a) Plough—different types.
- (b) Cultivators—different types.
- (c) Seed drills—
- (d) Harvesting implements—Reapers, mowers etc.
- (e) Thrashing machines.
- (f) Winnowers—

(II) *plant protection equipment* :

- (a) Hand, foot and power driven sprayers.
- (b) Hand, foot and power driven dusters.

## Unit 3 :

- (a) Selecting suitable Water lifting devices/appliances such as electrical motor and pump diesel water pump.
- (b) Diesel motor and pump (Minor repairs & Maintenance. Electric Motor Pump)

## Unit 4 :

Graden tractors—important parts and functions—care and maintenance and minor repairs. Hitching of various attachments.

## Unit 5 :

Fabrication of the simple poultry and dairy equipment in the workshop such as water through feeder, pans, sieves etc.

## Unit 6 :

*Farm Electricity :*

Electrical over head wiring. Installations of pumps and motors; simple faults, their detection and repairs, checking connections of energy meter and distribution board. Use of Electrical appliances such as incubators, brooder debeaker & other simple power operated machines. Simple electrical wiring layout for a village and farm. Simple Layout of electrical wiring for a house and agriculture workshop.

### APPENDIX III

*(Ref. Reso. No 21 dated 8-2-71 of faculty of Science)*

MINUTES OF THE JOINT MEETING OF THE BOARD  
OF STUDIES IN BOTANY & ZOOLOGY HELD ON  
23-9-70 at 11.30 A.M. AT THE UNIVERSITY  
DEPARTMENT OF ZOOLOGY, JAIPUR.

#### Present

1. Dr. P.N. Mathur *(in the chair)*
2. Dr. B. Tiagi
3. Shri S.D. Mishra
4. Shri Har Swarup
5. Shri S.L. Mathur
6. Shri S.K. Tandon
7. Shri D. Gupta
8. Dr. P.N. Srivastava *(Special invitee)*
9. Shri G. Raju (Reg. College, Ajmer)
10. Shri R.K. Bhartiya (Reg. College, Ajmer)

1. Before taking the agenda, the members elected Dr. P.N. Mathur as Chairman of the Board.

2. The members of the Joint Board of Studies in Botany and Zoology, University of Rajasthan, Jaipur place on record their deep sense of sorrow on the sad and sudden demise of Shri Anand Behari Lal Saxena, a member of the Board of Studies in Zoology, and senior Lecturer, Government College, Nathdwara on 29th August, 1970 in the early morning hours. They pray for abiding peace to the departed soul and for courage and strength to bear this irreparable loss to the member of the berieved family.

Further resolved that a copy of this resolution be sent to Mrs. Saxena, Nathdwara.

3. The Board offered no comments on the reports of examiners and question papers set for the examination of 1970 as the reports were not circulated.



4. The Board scrutinised the statements of qualification and teaching experience etc. of teachers (received from University Teaching Departments, University College, affiliated institutions and other Universities) for inclusion in the revised panel of examiners for 1971 and revised the panel accordingly.

5. The Board recommended course of study and text books in Biology for the following examinations together with changes in Regulations and Ordinances—

- |  |             |
|--|-------------|
| 1. Pre-University Examination, 1972    | — No change |
| 2. B.Sc. pass First Year Exam. of 1972 | — No change |
| 3. B.Sc., B.Ed. examinations           | — No change |

6. It was reported that as desired by the Academic Council vide its Res. No. 40 dated the 15th January, 1969, a circular was sent to all the institutions inviting suggestions of the teachers in regard to the courses of study, for consideration of the Studies concerned.

In this regard the Joint Board considered a copy of letter No. UDZ/Endt./1944.45 dated 16-9-70 from Dr. P.N. Srivastava, University Prof. & Head of the Department of Zoology, Jaipur to the Principal, Govt. College, Sri-Ganganagar, and after discussion it was agreed that Frog can be substituted by Rat with the addition of dissection of brain and hyoid apparatus alongwith other system. However, it was agreed that students should invariably be demonstrated all the dissection described in Rat itself so that if the examiner puts a simple question on rat, the candidates may not object to it. This should be circulated to all the affiliated colleges in the Faculty of Science, immediately.

The Joint Board considered a letter dated the 1st September, 1970 from Prof M.D. Ahuja, Head of the Department of Zoology, Seth G.L. Bihani S.D. College, Sri-Ganganagar regarding removal of the condition of obtaining 33% marks in each of the two theory papers (Botany & Zoology) in the subject of Biology at the Pre-University Science Examination.

Resolved that the Board unanimously left that in Pre-University (Biology theory aggregate marks obtained in Botany & Zoology papers be considered for determining results in the subjects.

7. It was reported that that the Academic Council, vide Res, No. 35 dated 21-4-70 accepted the following draft resolution proposed by Dr. Daya Krishha, Chairman, Examination Reforms Committee vide his letter No. Acd/c/1082 dated 17-7-70 as a result of discussion in the meeting of Examination Reforms Committee held on 17th April, 1970 :—

“Resolved that in the interest of raising standards of teaching and examinations and award of degrees the Board of Studies may prepare alternative Schemes of courses and Examinations in their respective subjects to be Implemented as early as possible.

## APPENDIX IV

(Ref. Reso. No. 21 dated 8-2-71 of faculty of Science)

MINUTES OF THE MEETING OF THE BOARD OF  
STUDIES IN ZOOLOGY HELD ON 23-9-70 at 12 NOON  
AT THE UNIVERSITY DEPARTMENT OF ZOOLOGY,  
JAIPUR.

Present

1. Dr. P.N. Mathur (Conver)
2. Prof. Har Swaroop
3. Prof. S.D. Misra
4. Shri S.L. Mathur
5. Shri G. Raju (*from Regional college of Education, Ajmer*)
6. Dr. P.N. Srivastava (*Special invitee*)

1. Under Section 34 E (8) of the University Act, the Board appointed Dr. P.N. Mathur, as a convener of Board of Studies in Zoology for the residue of the term of Dr. L.S. Ramaswami (*Ceased*).

2. Under Section 34 (4) (iv) of the University Act, the Board elected Shri S.L. Mathur, as a member other than the Convener of the Board of Studies to serve on the Committee for the Selection of examiners in the subject for the year 1971.

3. The Board offered comments, after going through the reports of examiners and question papers set for the examination of 1970 (*Vide Appendix 'A'*)

4. The Board scrutinised the statements of qualifications and teaching experience etc. of teachers (received from University Teaching Departments, University colleges, affiliated institutions and other Universities) for inclusion in the revised panel of examiners for 1971 and revised the panel accordingly.

5. The Board recommended courses of study and text books in Zoology for the following examinations together with some rare changes (*Vide Appendix 'B'*)

1. Pre-University Examination, 1972—No change.
2. B.Sc. pass First Year Exam. of 1972—No change.
3. B.Sc. (Pass) Second Year Exam. of 1973—No change.
4. B.Sc. (Pass) Final Year Exam. of 1973—No change.
5. M.Sc. (Prev.) and/or Final examination of 1972. —No change.
6. B.Sc. (Hons.) Pt. I & II Exam. of 1973-74—No change.
7. B.Sc., B.Ed. Exam.

6. (a) The Board of Studies considered the letter No. 1058/70 dated 2nd Sept, 1970 from the Principal, Government College, Ajmer regarding IInd Year T.D C. Examination in Zoology Practical and it was decided that the Museum specimens and Microscopic preparation of the invertebrate type be included in the syllabus and letter be sent to all the colleges, affiliated to the University in the Faculty of Science immediately.

It was also decided that the model question paper for IInd Year T.D C. Science (Zoology) IInd Paper be supplied to all the Colleges. Dr. P.N. Srivastava Head of the Department of Zoology, University of Rajasthan, Jaipur has very kindly agreed to set the question paper.

(b) The Board of Studies considered letter No. 1734/70 dated 22-7-70 from Shri D.M. Dubey, Principal, Govt College, Pali regarding IInd Year Zoology Syllabus and decided the following—

(i) *for theory*:—The scope of the course has already been indicated in the syllabus a copy of the letter in this respect be sent to all the colleges again.

(ii) *practicals*:—The detailed information will be supplied to the Colleges affiliated in the faculty of same by Dr. P.N. Srivastava, University Prof. & Head of the Department of Zoology, Jaipur.

7. The Board considered the following suggestions of the Vice-Chancellor made by him in consultation with the Convener of the Examination Reforms Committee—

paper Zoology of IIIrd Year T.D.C. (Sc.) 196J) (Rev. Edn.) Examination alongwith the remark of the paper setter to whom a reference was made was considered. The Board was of the opinion that the question paper was within the prescribed Syllabus.

12. A complaint dated 23rd April, 1970 received from the Head of the Deptt. of Zoology, University of Rajasthan, Jaipur, against the question paper Zoology Paper III (Fish and Fisheries) of M.Sc. (Final) Examination, along with the remarks of the paper-setter to whom a reference was made was considered. Resolved that the paper setter in (Fish and Fisheries III Paper, the paper of 1970 should not be sent.

13. Complaint dated 21-4-70 received from the Principal, Regional College of Education, Ajmer against the question paper of Zoology of III year B.Sc., B.Ed. Examination alongwith the remark of the paper-setter to whom a reference was made was considered.

The questions were definitely out of course, therefore, question paper of 1970 may not be sent.

14. A list of publications as printed in the catalogues received from the Senior Research Officer, Commission for Scientific & Technical Terminology (Ministry of Education) New Delhi, vide this letter dated 30-7-70 for inclusion in the University Syllabi, were considered by the Board.

The Board noted the recommendation.

15. A list of publications as printed in catalogues received from the National Book Trust India vide his letter No. F 37-2/69/Sc. dated the 7th November, 1969 for inclusion of their books in the syllabi of different examinations was considered and Board noted the same.

16. A revised Scheme of B.Sc., B.Ed Examinations together with the draft Ordinances/Regulations and the Syllabi for the same as proposed by the Principal, Regional College of Education, Ajmer vide his letter No. F 196/70/8576 dated the 29th July, 1970 was considered by the Board.

And the Board of Studies in Zoology authorised the Convener to scrutinise the B.Sc., B.Ed. Syllabus in consultation with Shri G. Raju of Regional College of Education, Ajmer and special invitee Dr. P.N. Srivastava, Univ. Prof.

& Head of the Department of Zoology, Jaipur and then the final report be sent to tht Faculty directly.

17. The Board revised the 'Instructions to examiners in practical's in the light of the Syllabus prescribed for the Examination of 1971.

The Meeting ended at 3 P.M. with a vote of thanks to the Chair.

Sd/-  
*Convener*

## APPENDIX A

Paper setter in the special group of M.Sc. Final examination be clearly explained that there are two papers in each special groups and it has happened in the past that the questions have been asked in one paper which pertain to the Syllabus of the other paper. Since, there is no moderation of papers in this University the paper setter are requested to go through the syllabus before setting the question paper.

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## APPENDIX B

*For 2nd Yr. Zoology paper II*

*Books recommended :*

Weiss :                      Science of Zoology

*For paper III & IV Radiation Biology*

**M.Sc. Final**

Books recommended for Radiation Biology

*Casey* : Biologics—concept and Mechanisms

*Whitt* : Introduction to atomic and Nuclear Physics both  
published by *Van Nostrand*              East Everest Press

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## SCHEME OF EXAMINATION, (ZOOLOGY)

B. Sc., (PASS) After Three Years of Higher Secondary or  
P. U. C.

&

B.Sc., (Hons.) B.Ed.—After Fourth Years of Higher Secondary  
or P. U. C.

*Duration Max. Internal External*  
*Marks. Assess Assess-*  
*Ment. Ment .*

*First Year :*

(a) One Theory Paper	3 Hours	50	10	40
(b) One Practical Exam.	3 Hours	25	5	20

*Second Year :*

(a) Paper I—Non— chordata	3 Hours	50	10	40
(b) Paper II—Cytology, Genetics and Evo- lution.	3 Hours	50	10	40
(c) One Practical Examination.	3 Hours	50	10	40
(d) Plant Protection (Vocational Sub- ject for Zoology group). Practical Exam. Only at the end of IIIrd Year.	6 Hours	50	10	40



*Third Year :*

(a) Paper I	)				
	)				
Section A:Ch-					
orda:Verrebrata)	3 Hours	50	10	40	
)					
Section B:Proto-					
chordata & Embr-)					
yology	)				
(b) Paper II-Animai					
Physiology					
Ecology.	3 Hours	50	10	40	
(c) One Practical					
Examination.	5 Hours	50	10	40	
(d) Poultry Production					
(Vocational Subject)					
for Zoology groups					
(Practical Exam.					
only)	6 Hours	100	20	80	

*Fourth Year :*

(a) Paper I-Biological					
Chemistry & Cell					
Physiology.	3 Hours	100	20	80	
(b) Paper II-Labora-					
tory and Museum					
techniques and					
Indian Fauna.	3 Hours	100	20	80	
(c) Practical Exami-					
nation.	6 Hours	100	20	80	

(d) Bee-keeping and  
cattle Manage-  
ment.

Vocational subject  
for Zoology group.

Theory.	3 Hours	100	20	80
Practical.	3 Hours	100	20	80

*Note* :—Percentage of marks for passing 36% student should pass separately in the internal and external assessment and as well as in Theory and Practical examinations.

*I-Year Biology (Zoology)*

## PAPER II

Maximum Marks : 50

Internal Assessment : 10

External Assessment : 40

*Duration 3 hrs.*

Unit 1. Origin of life—First cell, properties and types of early cells—Viruses—an elementary account.

Unit 2. Historical-cell structures, animal versus plant cells, cell size and shape; chemical composition of Protoplasm, Colloidal state, Brownian Movement, sol-gel transformations, Protoplasmic members, Structure of Protoplasm-nucleus, cytoplasm.

Unit 3. Cell Division and cell differentiation : mitosis and cytokinesis; significance of mitosis; Meiosis elementary account, tissues; organs; organ systems.

Unit 4. Lower animals :

Protozoa : general account; *Amoeba* Life cycle of malarial parasite, *Hydra*, tapeworm, earthworm, *pila*, Cockroach.

Unit 5. Higher animals :

General characteristics of chordates, class characters with some examples of pisces, Amphibia, Reptilia, Aves and Mammalia. Development of frog, Rabbit, Anatomy and Physiology.

Unit 6. An elementary knowledge of the evidence of Organic Evolution and the theory of Natural selection.

*I-Year Biology : Zoology (Practical)*

Maximum Marks : 25

Internal Assessment : 5

External Assessment : 20

*Duration-3 hrs.*

1. Dissection : Rat
  - ( i ) Alimentary canal
  - ( ii ) Vascular system
  - (iii) Urinogential system.
2. Osteology of Rabbit and Frog.
3. Dissection : *Cockroach* :
  - ( i ) General viscera
  - ( ii ) Alimentary canal
  - (iii) Mouth parts mounting.

*Earthworm* :

  - ( i ) Alimentary canal
  - ( ii ) Nervering, mounting
  - (iii) Ovary, Spermatheca mounting.
4. Microscopic study as in syllabus.
5. Glycerine preparations :
  - ( i ) Striated & smooth muscles.
  - ( ii ) Hyaline cartilage.
  - (iii) Blood of rat or man/frog.
6. Diagnosis classification and notes on museum specimens as in syllabus.
7. Demonstration of circulation of blood in the web of frog.

*II-Year Zoology (Hons. & Pass)*

Theory 2 papers, each of 40 marks and 3 hours duration. 10 marks internal.

## PAPER I-NON-CHORDATA

Maximum Marks : 50

Internal Assessment : 10

External Assessment : 40

*Duration—3 hrs.*

## Unit 1, Principles of classification :

Resemblance and difference. The Binomial system. The impact of evolutionary thought on Taxonomy. The new systematics, Homology, Analogy, Transformation. The Irrevocability of Evolution, Convergence divergence and parallelism.

Study from an evolutionary stand point the classification (upto class) biological principles of the following phyla and structure habits and reproduction of different animal types as illustrated by the following :

## Unit 2. Protozoa :

*Amoeba, Euglena, Monocystis, Plamodium, paramecium, polystomella; Opaline, Protozoa and disease.*

## Unit 3. Porifera :

*Sycon*

## Unit 4. Coelenterata :

*Obelia, Aurelia*, general account of sea anemone.

## Unit 5. Ctenophora :

Salient features & examples.

## Unit 6. Plathelminthes :

*Fasciola. Taenia*, salient features of *planaria*.

## Unit 7. Nemathelminthes :

*Ancaris*, Nematode parasites of man. Host parasite relationship & parasitic adaptations.

## Unit 8. Annelida :

*Pheretima, Nereis, Hiardineria.*

## Unit 9. Phoronida :

Phoronis, Affinities :

## Unit 10. Arthropoda :

*Perinatus* as a connecting link; *prawn*; Scorpion; ticks and mites. Economic importance of insects. Insect control and insecticides; Crustacean larvae.

## Unit 11. Mollusca :

*Lumellidens, pila, Sepia (or Logigo).*

## Unit 12. Echinodermata.

Starfish External features only.

## PAPER II

## Cytology, Genetics &amp; General Biology

Maximum Marks : 50

Internal Assessment : 10

External Assessment : 40

*Duration : 3 Hours.*

- Unit 1. Cell Biology : The common Denominator of living matter life and the 2nd law of thermodynamics.
- Unit 2. Biological Statics : Life and the periodic table; Water and life : The small molecules of the living matter : the nucleic acids—Carriers of biological information; the proteins—agents of biological specificity.
- Unit 3. Biological Dynamics : Enzymes and biological control; Metabolic Pathways, Mitochondria and their function : The ground substance and the conversion of chemical energy into work : Nucleus and its role in cell function; The Ribosomes and utilisation of information; the membrane system and the exchange of material.
- Unit 4. Mitosis; Meiosis; Sex chromosomes and sex determination.
- Unit 5. Mendel's principles of Heredity. Linkage and crossing over. The chromosome theory : Genes and traits, transcription and translation, elements of genetic code, mutation, mutons, recons, cistrons; gene—gene interaction. Transmission of genetic material in bacteria and Bacterial viruses.
- Unit 6. History of evolutionary thought : including short life sketches of Mendel, Lamarck, Darwin, Wallace, De Vries, T. H. Morgan.

Unit 7 Darwinism : Theories replacing and supplementing the theory of Natural selection. Mutation theory. Embryology and Organic Evolution.

Unit 8 Concept of selection, -Bargman's law, Allen's law, Hardy-Weinberg law and Sewall-Wright effect.

Unit 9 Isolation, speciation, evolution above species level.

Unit 10 Animal distribution in time and space :

(i) Geological division of earth's crust; fossils, imperfections of fossil record.

(ii) Principal zoo-geographical regions with special reference to the fauna & boundaries of the Oriental region.

Unit 11 Code of Zoological Nomenclature.



## PRACTICAL

(One practical examination of 5 hours duration)

Maximum Marks : 50

Internal Assessment : 10

External Assessment : 40

1. Examination of a water drop, museum specimens and prepared slides of different animal groups. Study in living condition, structure (movement, ingestion, digestion, contractile vacuole response to chemicals (acetic acid) of *Paramecium*.
2. Dissection of the following :
  - (i) Earthworm : alimentary, circulatory, nervous and reproductive systems.
  - (ii) Leech : alimentary, nervous, reproductive and excretory system.
  - (iii) Prawn : appendages, alimentary and nervous system.
  - (iv) Cockroach : alimentary, nervous and reproductive (testes and vas deferens excepted) system. Salivary apparatus.
  - (v) Scorpion : alimentary, nervous and reproductive system.
  - (vi) *Unio* : alimentary and nervous system.
  - (vii) *Pila* : alimentary, nervous and reproductive system.
  - (viii) *Sania* : alimentary, nervous and reproductive system.
3. Mounting-temporary/permanent microscopic preparations of the following :

*Paramecium*, *Euglena*, *Amoeba*, *Volvox* spicules and gemmules of sponge, *Obelia*. Medusa; Setae, spermatheca, ovary and nerving of earthworm jaws, nephridia of leech; parapodia of *Nereis*, mouth parts and salivary apparatus of cockroach; appendages of

prawn, book lungs of scorpion; mouth parts of mosquito, crustacean larvae and gill of fresh water mussel, osphradium, Stasocyst and radula of *Pila*, and pedicellaria of starfish.

4. Study of epithelial cell lining the mouth, squamous epithelium of frog.
5. Study of mitosis & meiosis by squash preparations. grasshopper, testis, salivary gland chromosome of *Drosophila*, *chironomus* larva.)

FOUR YEAR SCIENCE COURSE B.Sc. (PASS) AND  
B.Sc. (HONS.) B.ED. HONS. IN ZOOLOGY.

Practical Examination only.

At the end of 3rd Year.

Max. Marks : 100

Internal: 20

External : 80

*(II Year Plant protection)*

- |      |    |   |
|------|----|---|
| Unit | 1  | What is plant protection—Principles of plant protection.  |
| Unit | 2  | Broad classification of insects and pests (Entomological).  |
| Unit | 3  | Important stages in the life cycle of a major insects pests when they cause maximum damage and when they can be best controlled.  |
| Unit | 4. | Classification of Insecticides and their application method.  |
| Unit | 5  | Plant protection equipment; their handling, care and maintenance.   |
| Unit | 6  | Identification of important insects and pests of some major crops and vegetables and their control measures.  |
| Unit | 7  | Skills and abilities to be developed.<br>(a) Proper handling of Insecticides fungicides—precautions.<br>(b) Preparation of suitable solution, emulsions, mixtures etc. for applications.<br>(c) Practice in spraying, dusting and fumigation. |
| Unit | 8  | (i) Stored-grain pests and their control measures.<br>(ii) Rodent control and rodenticides.   |

Unit 9 (i) Important fungus, virus, bacterial diseases of some major food and vegetable crops, their symptoms and control measures.

(ii) Seed treatment and soil treatment.

Unit 10 Identification of some major Kharif.

1. Rabi and Zaid seasonal weeds and their classification.
2. Control measures against weeds.
  - (a) Chemical.
  - (b) Mechanical.

*III Year Zoology*

External Assessment : 40

Internal Assessment : 10

Two theory papers each of 50 marks and 3 Hours duration.

## PAPER I

## Section 'A'

*Chordata : Vertebrata*

- Unit 1 Origin of Vertebrates. Classification, structure and habits of animal types as illustrated by the following :
- Unit 2 Agnatha : Ext. features of *petromyzon*. *Ammocoeta larua* Comparison between Lampreys and Hagfishes- Primitive, advanced, specialized features.
- Unit 3 Chondrichthyes : *Scoliodon*.
- Unit 4 Amphibia : Frog. Difference between frog and toad Axolotol lerva ond Neoteny. Parental cone.
- Unit 5 Reptilia : Common Lizard (*Uromastix* or *Calotes*) (Skeleton of *Varanus* to be substituted.)  
Poisonous & Non-poisonous skin; poison apparatus.
- Unit 6 Avas : *Columba livia* (Skeleton of *Gallus* to be substituted.) Archaeoptery. Flightiess birds-chief characteristics and distribution. Migration. Some common Indian birds. Adaption for flight.
- Unit 7 Mammalia : Rabbit or Rat. Distribution and general characters of Prototheria and Metatheria.
- Unit 8 Comparative anatomy of the following systems in vertebrates from the point of view of evolution of chordate structure.
  - (a) Circulatory
  - (b) Respigatory
  - (c) Urinogenital and
  - (d) Nervous system.

PAPER I

Section 'B'

*Protochordata, Embryology*

- Unit 1 Hemichordata : Structure and habit of *Balanoglossus*. Tornaria Larva.
- Unit 2 Urochordata : Structure and habit of an Ascidian. Reprogressive metamorphosis.
- Unit 3 Cephalochordata : Structure and habit of *Branchiostoma* (*Amphioxus*)
- Unit 4 Gametogenesis. Fertilization, Cleavage : Determinate-Indeterminate.
- Unit 5 Early development and gastrulation of *Branchiostoma*. Frog & chick.
- Unit 6 The amniote cleidic efg. Formation of amnion and allantois in chick and mammal. Placentation in mammals. Types of placenta.
- Unit 7 Some basic principles of Embryology : Organisers, Gradients, Regeneration, Evolutionary principles of embryology.

*III Year Paper II*

Maximum Marks : 50

Internal Assessment : 10

External Assessment : 40

*Duration -3 hrs.*

## ANIMAL PHYSIOLOGY AND ECOLOGY

1. Organic and Inorganic constituents of protoplasm.
2. Elementary knowledge of Enzymes.
3. Nutrition : Hunger, ingestion, digestion, absorption and egestion. Transport Pathways. The role of liver. Carbohydrate Distribution. Amino acid distribution Lipid distribution. Other Nutrients. Vitamins. Human Nutritional requirements.
4. Respiration : Oxygen and carbondioxide tension. Gaseous exchange in tissues and lung. Control of respiration. Glycolysis & citric acid cycles.
5. Body fluids : Composition and properties; corpuscles. Blood volume; blood pigments; coagulation of blood; formation and composition of lymph. Blood pressure. Blood circulation, Physiology of heart.
6. Excretion : Pathways of excretion, Structure and Physiology of mammalian Kidney, Ammonotelic and ureotelic uricotelic animals.
7. Movement : Ultra. Structure of muscle, Physiology of muscle contraction. Fatigue.
8. Integration : Structure and Physiology of nerve, transmission of impulse; reflex arc. Receptors. Eyes, Ear, Nose, Tongue and skin.
9. Endocrine glands; (General outline of the physiology of) Pituitary, Thyroid Parathyroid, adrenal, Islets of Langerhans. (with particular reference to mammals.)
10. Reproduction : Structure and physiology of gonads; ovum, sperm, Menstrual cycle, fertilization, Pregnancy,

gestation. Parturition (birth) Lactation. Harmonal regulation of reproduction (human).

11. Introduction to Ecology : Definition of autecology, population ecology, synecology (community ecology) ecosystem, biosphere, biome, biotope, biocoenosis, funna habitai and niche, population, community.

- 12.1 The flow of energy and materials : Environment, Abiotic factors : Biotic factors. Cycle of materials : The carbon cycle : The nitrogen cycle. Mineral cycle.

Transfer of energy : the first law of Thermodynamics. The second law of thermodynamics. Energy relations communities, trophic levels, food chains and pyramid of numbers.

13. Population and community interactions :  
Interspecific interactions : symbiosis, commensalism. Parasitism. Predation. Intra-specific Interactions : Constitution, cooperation. Insect societies, human societies.

15. Change in populations and communities :  
The rise and fall of populations. Biotic potential. Environmental. Density—-independent and density dependent factors. Limiting and balancing factors. Periodism  
Succession : physiographic succession, biotic succession, sequence of community change.

15. Habitat :  
Adaptation in animals to terrestrial life, aquatic life, desert life, high altitude life etc., Poikilothermic and Homoeothermic animals, Hibernation, migration and dispersal of animals.



### Practical

Maximum Marks : 50

External Assessment : 40

Internal Assessment : 10

Practical examination of 5 hours duration.

1. Examination of museum specimens and microscopic Preparation of chordata.
2. Dissection :
  - (i) *Scoliodon* : alimentary, circulatory, nervous and urinogenital system, Internal ear muscles.
  - (ii) Frog : Circulatory, nervous, urinogenital system; hyoid apparatus.
  - (iii) Lizard : alimentary, circulatory, urinogenital system; hyoid apparatus.
  - (iv) Pigeon or fowl : Fight muscle; alimentary, circulatory, urinogenital system. Perching mechanism.
  - (v) Rabbit guinea pig or rat alimentary, circulatory and urinogenital system.
3. Osteology of frog *varanus*, fowl and rabbit.
4. Permanent/temporary microscopic preparation of *Amphioxus*, placoid scales, cycloid scales, internal ear of *Scoliodon*, different types of feathers of bird, pecten.
5. (a) Study of the embryological slides of *Amphioxus*, frog and chick.  
(b) Study of development with help of preserved materials, models and charts.
6. Examination of prepared slides of different tissues such as striated muscle fibre, bone, cartilage, kidney, liver, parts of alimentary system (Stomach, intestine), epithelial tissues of mammal. Skin, Testes, ovary, pancreas, long bone, blood of frog and mammals.

7. Field work : Zoological excursion under tutition atleast for 14 days.
8. Measurement of rate of respiration in cockroach/fish/rat/man. Enumeration of R.B.C. in forg and man with the help of haerocytometer. Estimation of hamoglobin in frog and man with hemoglobinometer.
9. Paper chromatography (Identification and separation of suga and amino scids).
10. Enzyme action—Salivary amylase, Invertase, pepsine, trypsin.
11. Study of the effects of drugs on the rate of heart beat by Hymograph.
12. Active transport using fish kidney.
13. Permeability of cell membrane.
14. Detection of protein, carbohydrate and fat.
15. Test of urea, glucose in the urine.
16. Recording of muscle contration in the gastronemius muscle nerve preparation of frog.
17. Induced ovulation.
18. Reflex action study in decapitated.
19. PrePared slides and collection of specimens made by the students dnring the course along with the practical record books must be presented at the time of tpe practical examination.

FOUR YEAR SCIENCE COURSE-B.Sc. (PASS) B.Sc.  
(HONS.) B.Ed, HONS. FOR ZOOLOGY  
STUDENTS ONLY.

*III-Year Poultry Production*

Practical Examination only.

Max. Marks : 100

Internal Assessment : 20

External Assessment : 80

Unit 1. Needs and scope for expansion of poultry industry.

Unit 2. Pre-requisites for a successful poultry enterprise.

- (a) Suitable location
- (b) Cost to start
- (c) Size of poultry farm.
- (d) Choosing a suitable breed of chickens.
- (e) Know-how of the job of business.

Unit 3. Steps in starting a poultry enterprise.

- A (a) Deciding the system of raising (Range versus confinement).
- (b) Identifying the materials and cost of construction of a suitable poultry house.
- (c) Equipment and appliances required to run a poultry farm, their cost and source.
- B (a) Raising of poultry birds for (i) Egg production  
(ii) Meat production
- (b) Rearing of : (1) Day old chicks (2) Growers  
(3) Layers.
- (c) Feeds and feeding of day old chicks, growers and layers.
- (d) Symptoms and preventive curative measures of poultry diseases.

Unit 4. Skills in hhdling poultry flocks.

- (1) Identification of important breeds of poultry.
- (2) Rearing of day old chicks in brgodes:
- (3) Incoulation against Ranikhet, Fowl-pox and other diseases.
- (4) De-beaking.
- (5) Fixing feeders, waterers and othe equipment in a poultry house.
- (6) Selection and management of litters.
- (7) Cleaning of poultry house including feeders, waterers etc.
- (8) Mixing of feeb for day old, growers, layers and broilers.
- (9) Culling of poultry birds.
- (10) Identifying broody and sick birds.
- (11) Administration of medicines through feeds and water.
- (12) Care and management against insects rnd pests.
- (13) Collecting; clearing, grading and marketing of eggs.

Unit 5. Planning, organizing and conducting home and school projects in poultry.

Unit 6. Practice in Record keeping and calculating the cost of productin of eggs per dozen.

*ZOOLOGY: B. Sc. (HONS.) B. Ed. IV YEAR.*  
PAPER—I

Max. Marks : 100

Internal Assessment : 20

External Assessment : 80

*Duration : 3 Hours.*

**BIOLOGICAL CHEMISTRY AND CELL PHYSIOLOGY**

- Unit 1. Basic Chemical Concepts :  
Atomic structure, molecular structure, chemical reactions.
- Unit 2. Analysis of Organic Constitutions in Living systems  
Chemistry of carbohydrates, proteins, lipids, nucleic acids and vitamins.
- Unit 3. Biocatalysis : Enzymes.  
Preparation of enzyme extracts. Chemical nature of enzymes. Classification of enzymes.  
Properties and specificity of enzymes.  
Factors influencing enzyme action.
- Unit 4. Energy considerations in Cells :  
Forms energy and laws of thermodynamics Oxidation—reduction.  
High energy bonds and compounds.  
Photochemistry.
- Unit 5. The structure and function of the organelles.  
Endoplasmic reticulum, Ribosomes,  
Mitochondria, Golgi apparatus, Centrioles and lysosomes.
- Unit 6. The Chemical Organization and function of the Cell nucleus :  
Relation between nucleus and cytoplasm  
Chemical composition of the nucleus  
Molecular structure of the chromosomes  
Chemical nature of Gene.  
Genetic code and DNA.
- Unit 7. Water and Electrolytes in the Cell environment :  
Colloids, Emulsions and suspensions, surface tension and viscosity.  
Acids—bases. hydrogen ions, buffers.

- Unit 8. Exchange of materials across the Cell membrane :  
Movement of water across the cell membrane.  
Movement of solutes through the cell membrane.  
Active transport through the cell membrane.  
Chemical nature of the cell membrane.
- Unit 9. Cell Metabolism.  
Energy cycle and energy transformation.  
Alcoholic fermentation.  
Glycolysis.  
Krebs citric acid cycle.  
Biosynthesis.  
Bioluminescence.
- Unit 10. Irritability and Contractibility.  
Bioelectrical phenomenon in cell.  
Nerve impulse and its transmission contraction of  
muscle fibers and its biochemistry.
- Unit 11. Cell Growth and Death.  
Growth of cells in tissue culture.  
Cancer  
Senescence and Death of Cells.

## ZOOLOGY B.Sc., (Hons.) B. Ed., IV YEAR.

## PAPER II

LABORATORY AND MUSEUM TECHNIQUES AND  
INDIAN FAUNA

Max. Marks : 100

Internal Assessment : 20

External Assessment : 80

*Duration 3 Hours.*

## Section 'A'

Unit 1. Methods of collection and preservation of invertebrate animals (including a detailed account of insect collection and preservation).

- (i) Collection methods and equipment for insects: Construction details of insect collecting net. Different kinds of nets: aerial net, sweep net, ground net, aquatic Dip net, dredge net etc. other collecting devices : Aspirators, Dippers, Berlese Funnel, Traps (funnel trap, can trap, light trap).
- (ii) Construction details and use of killing bottles.
- (iii) Field storage of insects.
- (iv) Construction details of mounting equipment.
- (v) Relaxation of specimens, larval inflation, etc.

Unit 2. Principles and techniques of taxidermy.

Unit 3. Storage of Museum specimens and their care: Liquid storage: Dry storage, pests and fumigation, arrangement and display of specimens.

- Unit 4. Aquarium. Theoretical and practical aspects of its setting up and maintenance including food and feeding methods, aeration, breeding of fishers, diseases of aquarium fish and their prevention and cure. different kinds of aquarium fishes.
- Unit 5. Analysis of water samples and estimation of their pH, oxygen content, phosphate, nitrate, chlorides, sulphates, turbidity, carbon dioxides, carbonate and bicarbonate. Plankton population density.
- Unit 6. Principles and practice of culturing and/or rearing of invertebrate animals and vertebrate animals with reference to protozoans. *Hydra*, Planarians, Annelids, insects, *Chironomus* and mosquito, larvae, copepods, *Daphnia* snails, amphibians, reptiles, birds and small laboratory mammals.
- Unit 7. Principles and practice of micro-technique (fixing and fixatives, staining and stains, embedding, sectioning and mounting).
- Unit 8. Theory and practice of the elements of Histochemistry.
- Unit 9. Basic principles and use of chromatography, Electrophoresis, manometry, calorimetry, Spectrophotometry, Microscopy and ultra centrifuge in biological investigations.

#### Section 'B'

- Unit 10. A study of the most common Indian representatives of major invertebrate phyla with reference to their distribution and bionomics.
- Unit 11. An account of the distribution and bionomics of common fishers, fishes including economically important marine and fish water forms, amphibians, reptiles birds and mammals.



- Unit 12. Indian wildlife and its problems. National parks and sanctuaries, conservation of wildlife, pollution of air and water and its effect on fauna, Bird watching & Bird banding.
- Unit 13. Professional societies and laboratories in India for the study of animals and their problems.
- Unit 14. Animal products of commercial importance with a particular reference to Indian situation-

## IV YEAR

## Practicals

Duration ---6 hrs.

Max. Marks : 100

Internal Assessment : 20

External Assessment : 80

1. Culturing and rearing of the following invertebrates Protozoons, *Hydra*, Planarains, annelids earthworm and leech Copepods, *Daphnia*, snails, insects and Chironomid larvae.
2. Culture of *Drosophila*.
3. Methods of collection and Dry and wet preservation of different groups of invertebrate animals.
4. Practice in the techniques of taxidermy (Any two birds and two mammals and a reptile to be stuffed and submitted by each student).
5. Practice in setting up a balanced aquarium and its maintenance.
6. Microtechnique work (fixing of animals, preparation of stains and fixatives, staining, embedding, section cutting and mounting).  
25 slides to be submitted by each student.
7. Practice in Histochemistry techniques (staining).
8. Practice in stand whole mounts squash preparations and arear techniques.  
25 slides to be submitted by each student.
9. Preparation of skeleton (articulated and disarticulated) and Aligarin Techniques,
10. Practice in use of paper chromatography, photoelectric calorimeters, pH meter and electrophoresis.
11. Preparation of mixture of amino acids using thin layer chromatography.
12. Separation of mixture of sugars using paper chromatography.

13. Extraction of digestive enzymes from vertebrate animals and study its activity at different.  
(a) pH (b) temperature (c) duration.
14. Collection and preservation of different kinds of insects (25 identified specimens of insects to be mounted and submitted by each student).
15. Identification of most common Indian animals (vertebrates and invertebrates).
16. Analysis and estimation of chemical substance dissolved in water.
17. Collection and analysis of bottom fauna and plankton from river or pond.

The specimens and slides prepared during the course and the laboratory practical record note book maintained during the course should be submitted at the time of the practical examination.

FOUR YEAR SCIENCE COURSES & B. Sc.  
(PASS) AND B.Sc. (HONS.) B. Ed.  
HONS. IN ZOOLOGY

*IV Year (Bee-keeping and Cattle Management )*

Total Marks : 200

Theory : Internal : 20  
                    External : 80  
Practical : Internal : 20  
                    External : 80

*Bee-keeping :*

Unit 1 : Importance of Bee-keeping.

Unit 2 : Species of Honey bee.

Unit 3 : Methods of Bee-keeping.

Unit 4 : (a) Equipment required for bee-keeping.  
(b) Their handling and maintenance.

Unit 5 : A : Skills in :  
(a) Selection of site for the beehive fixing.  
(b) Acquiring bees of appropriate species.  
(c) Management-Seasonal-of Honey bees.  
(i) Swarms management.  
(ii) Management during honey-flow.  
(iii) Honey extraction.

B : Problems, Enemies and Diseases.

*Cattle Management : Cattle, sheep and Goat.*

Unit 1 : India's cattle problems and improving the present cattle through breeding and artificial insemination.

Unit 2 : Identification of important breeds of  
(a) Cow (b) Buffalo (c) Goat (d) Sheep.

Unit 3 : (a) Feeds and Feeding : Principles of feeding different animal. Identification of different feeds.  
(b) Care and management of :  
(i) New born calf (ii) Heifer (iii) Working animal (iv) Milch-animal (v) Pregnant animal etc.

Unit 4. Important infectious diseases of Cattle, their symptoms and control measures.

Unit 5. Skills and abilities to be developed in :—

- (a) Cleaning, disinfecting cattle barns and milking.
- (b) Handling and throwing of animals.
- (c) formulating balanced rations and mixing.
- (d) Dehorning, castration.
- (e) Clean milk-production.
- (f) Measuring temperature-pulse rate and treating animal for simple ailments.

Unit 6. Principles of planning simple and low cost :—

- (a) Dairy housing.
- (b) Procurement of equipment required for Dairy.
- (c) Record keeping.

## APPENDIX No. 5

*Ref :-Res. No. 21 dated 8.2.71. of faculty of Sc. )*

Minutes of the Meeting of the Board of Studies in Geology Held on 22nd September, 1970 at 12 noon in the University Office, Jaipur.

## Present :

1. Dr. M. W. Chaudhari (Donvenor)
2. Dr. M. K. Pandya
3. Dr. N. C. Jain
4. Shri B. Prasad
5. Prof. Dr. I. C. Pande (External)

1. Under Section 34(4) (iv) of the University Act, the Board elected Shri B. Prasad as a memmber other than the Convenor of the Board of Studies to serve on the Committee for the Selection of examiners in the subject for the year 1971.

2. The Reports of the Examiners for the various examinations held by the University in 1970 were made available to the Board only at the time of the meeting. The Board recommended that they should be circulated amongst its members at least one week in advance so that they get enough time to go through them carefully.

No comments.

3. No statemehts of qualifications & teaching experience etc. of teachers for inclusion in the panel of examiner were received.

4. The Board recommended courses of Study and textbooks in Geology for the following examinations together with changes as noted below :—

1. Pre-University Examination, 1972—No Change.

*B.Sc. Pass Ist Year Examination, 1972, IInd Year Examination 1973 and Final Year Examination 1974 and B.Sc. Hons. Pt. I Examination 1973 and Pt. II Examination 1974.*

The existing courses be repeated. Geological Tours are compulsory for all these classes. Failures to attend the tours may disqualify for appearing in these University Examinations Students are required to submit the Tour Report of the field work done by them during ihe tour.

*M.Sc. Previous and M.Sc. Final Examination. 1972 and 1973 respectively.*

The Board recommended that the existing theory examinations of these examinations be reconstituted as follows:-

*M.Sc. Previous Examination 1972*

**Theory Paper :**

Paper I—General Geology & Structural Geology.

„ II—Crystallography & Mineralogy.

„ III—Palaeontology.

„ IV—Petrology.

*M. Sc. Final Examination 1973*

**Theors Papers**

Paper V—Economic Geology

VI—Stratigraphy & Geology of India

VII—Special paper—Elements of Applied Geology.

5. It was raported that as desired by the Academic Council vide its Res. No. 40 dated 15th January, 1969, a Circular was sent to all the Institutions inviting suggestions of the teachers in regard to the courses of study, for consideration of the Board, but no suggestions had been received. Resolved that the report be recorded.

6. The Board considered the following suggestions of the Vice-Chancellor made by him in consultation with the Convener of the Examinations Reforms Committee :—

A. Regarding award of Sessional marks, these may be awarded on the basis of Articulation, Comperehen-sion and Objective Tests of the students as per details given below :—

**Articulation—4 marks**

Each student may be required to write atleast one essay on the subject each term. This may be assessed by 2 independent teachers independantly and marks recorded, Marks may be declared publicly and if any student feels aggrieved he may be explained what that particular award given.

**Comprehension—3 marks**

A test may by conducted each term to examine whether the students have picked up the appropriate expression, and have understood the subject matter.

**Objective Test—3 marks**

Under this category marking may be done but the marks may not be shown to the candidate. But the solution may



be written by the teacher and posted on the notice board so that the students may know the correct answers. If this rational basis is adopted there is a change of increasing the quantum of internal assessment.

B. As regards syllabus at the Post-graduate level I suggest that—

- (i) a list of full and half courses may be prepared according to the availability of teaching competence.
- (ii) it may be possible for a student to offer two full courses as a topic to give specialisation in that topic. Such a student would prepare himself for research in this topic.
- (iii) a student who wishes to learn the subject for becoming a teacher, he may offer 4 half courses covering a variety of topics to have an extensive view of the subject. In fact the students may have to choose one full and two half courses.

C. For very few bright students it may be suggested that they may be encouraged to do some self-study on pre-assigned topics which are not included in their curriculum and they may be assessed entirely on that as far as sessional marks are concerned.

The Board accepted in principle the suggestions made the Vice-Chancellor and suggested that the Semester system should be introduced for the proper implementation of these schemes.

7. It was reported that the Academic Council, vide its Res No. 35 dated 21.4.70. accepted the following draft resolution proposed by Dr. Dayakrishna, Chairman, Examination Reforms Committee vide its letter No. Ac/c/1082 dated 17.4.70. as a result of discussions in the meeting of the Examination Reform Committee held on 17th April, 1970 :—

“Resolved that in the interest of raising standads of teaching and examinations and award of degrees the Board of Studies may prepare alternative Schemes of courses and Examination in their repective subjects to be implemented as early as possible.”

*Resolved* that the aforesaid recommendation be noted.

8. The Board considered the following recommendation No. 10(ii) dated 20.9.1969 of the Board of studies in Chemistry as desired by the Faculty of Science vide its Res. No. 11 dated the 31st January, 1970 :—

“The Board considered the proposal to change the ratio of marks of theory to practicals from 4:2 to 3:2 in M.Sc.Final examination as is the practice in almost all the Universities in the country. Resolved to recommend that the proposals be accepted and maximum marks for theory papers be 75, the total being 300 marks for four thyory yapers. The practical marks be 200 as at present.

*Resolved* that the aforeraid recommendation be not accepted.

9. The Board considered the following recommendation No. 10(c) dated the 7th November, 1969 of the Board of Studie in Physics as desired by the Faculty of Science vide its Resolution No. 17 dated 31.1.2970.

“That in M. Sc. examination it should not necessary for the candidate to get a minimum of 25% marks in each paper and resolved that the condltion for passing the M.Sc. Examination be deleted.”

*Resolved* that the aforesaid recommeudation be not accepted.

Sd./—M.W. Chaudhery  
(Convener)

## APPENDIX No. 6

(*Ref. : Res. No. 21 of Faculty of Science dated 8-2-71*)

Minutes of the Meeting of the Board of Studies in Chemistry held on 25th September, 1970 at 12 noon at the University Office, Jaipur.

**Present**

- |                        |                            |
|------------------------|----------------------------|
| 1. Prof. R.C. Mehrotra | ( <i>in the Chair</i> )    |
| 2. Dr. G.V. Bakore     |                            |
| 3. Dr. S.N. Mathur     |                            |
| 4. Dr. S.S. Dube       |                            |
| 5. Dr. R.D. Tiwari     |                            |
| 6. Dr. N.C. Sogani     |                            |
| 7. Dr. M.V. Sabnis     |                            |
| 8. Dr. P.D. Bhatnagar  |                            |
| 9. Dr. K.C. Joshi      | ( <i>Special Invitee</i> ) |
| 10. Dr. J.N. Gaur      | do                         |
| 11. Dr. C.S. Bhandari  | do                         |

1. Under Section 34 (4) (IV) of the University Act, the Board elected Dr. N. C. Sogani as a member other than the convenor, B.O.S, to serve on the Committee for the selection of the Examiners in Chemistry for the year 1971.

2. The Board went through the reports of Examiner for the Examinations of 1970 and did not offer any comments.

3. The Board scrutinised the statements of qualifications and teaching experience etc. of teachers (received from University teaching departments, University Colleges, affiliated Institutions, and other Universities) for inclusion in the revised panel of examiners for 1971 and revised the panel accordingly.

- (i) The office was directed to include all internal teachers satisfying the minimum prescribed qualifications to be included in the panel.

- (ii) It was recommended that the names of teachers working in the Regional College of Education, Ajmer and M.R.E. College, Jaipur be included in the panel to internal Examiners;

4. The Board recommended courses of study and text books in Chemistry for the following Examinations together with changes in Regulations and Ordinances :—

For the First Year, Second Year and Third Year Examination, the Syllabus as included was approved.

For T.D.C. Part I Practical Examination as given on page 21 of 1970 Edition, the following omissions were made :

*Seventh line for bottom :* 1. Such practical work as is required for the Pre-University Course. (Omitted).

For M.Sc. Examination, the following omissions were made on page No. 110 and 127 :

*S. No. 4 page No. 110.* To be inserted as heading:

Phase rules studies of the following two component systems.

*S. No. page No. 27 :* To be inserted as heading:

The remodynamic derivation of Phase Rule and its application to three component systems,

For B. Sc. B. Ed. examination, the syllabus as enclosed was approved.

5. It was reported that as desired by the Academic Council vide its Resolution No. 40 dated 15th January, 1969, a circular was sent to all the institutions inviting suggestions of the teachers in regard to the changes in the courses of Study for the consideration of the Board of Studies in Chemistry

It was noted that no suggestions were received. However, suggestions regarding new T. D. C. Syllabus have been given due consideration.

6. The Board considered the following suggestions of the Vice-Chancellor made by him in consultation with the Convener of due Examinations Reforms Committee :—

- A. Regarding award of Sessional marks, these may be awarded on the basis of Articulation, Comprehension and Objective Tests of the students as per details given below :—

*Articulation—4 marks*

Each student may be required to write atleast one essay on the subject each term. This may be assessed by 2 independent teachers independently and marks recorded. Marks may be declared publicly and if any student feels aggrieved he may be explained why that particular award was given.

*Comprehension—3 marks*

A test may be conducted each term of examiner whether the student have picked up the appropriate expression, and have understood the subject matter.

*Objective Test—3 marks*

Under this category marking may be done but the marks may not be shown to the candidate. But the solution may be written by the teacher and posted on the notice board so that the students may know the correct answer. If this rational basis is adopted there is a chance of increasing the quantum of internal assessment.

- B. As regards syllabus at the Post-graduate level I suggest that—

- (i) a list of full and half courses may be prepared according to the availability of teaching competence.
- (ii) it may be possible for a student offer two full courses as a topic to give specialisation in that topic. Such a student would prepare himself for research in this topic.
- (iii) a student who wishes to learn the subject for becoming a teacher, he may offer 4 half courses covering a variety of topics to have an extensive view of the subject. In fact the students may have to choose one full and two half courses.

- C. For very few bright student, it may be suggested that they may be encouraged to do some self-study on pre-assigned topics which are not included in their curriculum and they may be assessed entirely on that as far as sessional marks are concerned.

The Board resolved to recommend that

- (a) An effort may be made to include 'objective test' type of questions.
- (b) As a new syllabus is being suggested for undergraduate classes, the matter of full and half courses at the Post-graduate level be taken up next year when a new syllabus for that level is considered.

7. It was reported that Academic Council, vide its Resolution No. 35 dated 21-4-70 accepted the following draft resolution prepared by Dr. Dayakrishna, Chairman, Examination Reforms Committee vide his letter No. Acd/1082 dated 17-4-70 as a result of discussions in the meeting of the Examination Reforms Committee held on 17 April, 1970 :—

“Resolved that in the interest of raising standards of teaching and examinations and award of degrees the Board of Studies may prepare alternative Schemes of courses and Examinations in their respective subjects to be implemented as early as possible.”

The Board resolved to recommend same as 6 (b) above.

8. With reference to Faculty of Science Resolution No.12 dated 31-1-70 the Board considered the question of suggesting a separate syllabus for the proposed qualifying test paper in Mathematics to be cleared by the candidates who pass B. Sc. Examination without optional Mathematics and also suggesting consequential amendments to the relevant Ordinances 234 of the University Hand Book Part II governing admission to the M.Sc. Course.

The Board resolved that the syllabus prescribed for Elementary Mathematics in the Compulsory Group of subject at the B.Sc. level be accepted with the addition of :

(a) Simple differential equations of the First and Second order.

(b) Least square method.

9. Write reference to the Faculty of Science Resolution No. 11 dated 31-1-70, the Board considered its following recommendations No. 10 (ii) dated 29-9-69:—

“The Board considered the proposal to change the ratio of marks of theory to practicals from 4:2 to 3:2 in M.Sc. Final examination as is the practice in almost all the Universities in the country. Resolved to recommend that the proposals be accepted and maximum marks for theory papers be 75, the total being 300 marks for four theory papers. The practical marks be 200 as at present.”

*Resolved* that in view of further information received the present ratio of 400 in theory and 200 in practicals be continued.

10. With reference to the Faculty of Science Resolution No. 14 dated 31-1-70 the Board considered recommendation No. 10(c) dated the 7th November, 1969 of the Board of Studies in Physics to the effect that the condition of obtaining a minimum of 25% marks in each paper be deleted.

The Board did not offer any comment on it.

11. The Board considered the following complaints against the various question papers set for the Exams of 1970 as per details given below, and the replies of the paper setters to whom references has been made :

1. First Year T.D.C. (Sc.) - Chemistry Paper I from the Principal, Govt. College, Ajmer.
2. M.Sc. (Previous)—Chemistry Paper II from the Head of the Univ. Deptt. of Chemistry, Jaipur.
3. Final year B.Sc. B.Ed.—Chemistry Paper I from the Principle, Regional College of Education Ajmer.

The Board is of the opinion that no further action is necessary.

12. The Board considered a revised scheme of B.Sc.B.Ed. examinations, together with the draft ordinances/Regulations and the syllabi for the same as proposed by the Principal, Regional College of Education, Ajmer vide his letter No. F. 9-196/70/8576 dated the 29th July, 1970 and approved as suggested by the Principal.

Sd/—Dr. R. C. Mehrotra  
(Convener)



*Provisional Syllabus for First Year T.D.C.*

## PAPER I

## (General and Inorganic Chemistry)

Two questions will be asked from each section.

## Section 'A'

No. of  
Proposed  
Lectures.

1. *Development of Classical Model of an Atom :*

Bohr model of an atom, calculation of radius of the Bohr's orbit and energy of an electron, quantisation of electronic energy levels, spectral evidence for quantisation, Sommerfeld's extension (no mathematical treatment), Introductory concept of four quantum numbers. Pauli's exclusion principle, Hund's rule, Aufbau principle, concept of the spatial distribution of S and P orbitals and electron density.

8

2. *The periodic Law :*

Long form of the Periodic Table, Electronic configuration and the Periodic Table, Periodicity in properties Elementary ideas about ionisation potential, electron affinity, electronegativity and atomic radii. Types of elements, s, p, d and f block elements (configuration of s, p, d block elements only.)

6

3. *Theory of Chemical Bonding :*

The Octet rule, The ionic bond, Characteristic properties of ionic compounds

6

The covalent bond. Introductory concept of overlapping of orbitals,  $\sigma$  and  $\pi$  bonds. Coordinate bond. Ionic character of covalent bond. Polarities of covalent molecules, Oxidation number. Characteristic properties of covalent compounds.

Hybridisation, illustrated with examples of first and second row of elements in the periodic table. Shapes of common molecules.

### Section 'B'

#### 1. *Chemical Equilibrium and Ionic Equilibria :*

Generalised expression of law of mass action, experimental method for verification of mass law, application to systems such as  $N_2 + 3H_2 \rightleftharpoons 2NH_3$ ;  
 $PCl_5 \rightleftharpoons PCl_3 + Cl_2$ ;  $N_2 + C_2 \rightleftharpoons 2NO$ .

9

#### *Ionic equilibria :*

Arrhenius theory, evidence in favour of dissociation theory, Ionic product of water hydrolysis, relation between hydrolysis constant ionic product of water and dissociation constant, solubility product and its application to analytical chemistry.

#### 2. *Acids and Bases :*

Hydrogen and hydroxyl ions in aqueous solution, Lewis concept of acids, Dissociation of Acids. The concept of formal charge on ions. pK value, Buffer solutions. Theory of indicators for acids—alkali titrations. choice of indicators. Oxidation-reduction ion-electron concept. Balancing of equations by ion electron methods.

6

#### 3. *Colloidal State of Matter :*

Crystalloid and colloid, Classification of colloids, Preparation of colloids. Lyophilic and Lyophobic colloids, Cataphoresis, Electrophoresis, Tyndell phenomenon, Brownian movement, coagulation, Peptisation, Applications.

3

### Section 'C'

#### 1. *Metals :*

Nature of metallic state. The Metallic bond, Occurrence of metals in nature General princi-

8

ples of metallurgy as illustrateal by methods used for the extraction of Iron, Copper, Alumi-nium and Silver from various types of ores.

2. *s-Block Elements :*

General characteristics Trends in varia-  
tion of properties in periodic table of alkali and  
alkaline earth metals, General principles of  
preparing these elements and general chemistry  
of their compounds.

4

3. *d-Block Elements :*

General characteristics. elementary idea  
about para magnatism and diamagnetism, Diffe-  
rent oxidation states of transition elements as  
illustrated by copper, silver and gold, chromium  
manganese and iron.

4. *Preparation, Propereties and Uses of :*

Copper, sulphate, Oxides of copper Silver  
nitrate, Gold chloride, Calcium oxide, Calcium  
carbide. Calcium cyanamide, Superphosphate  
of lime. Portland cement, Plaster of paris, blea-  
ching power, potassium cichromate, chromyl  
chloride, potassium permanganate, manganese  
dioxide, potassium ferrocyanide, Mohr's salt.

5

*N.B. :* Numerical problems on the above topics and  
questions on principles involved in the syllabus  
prescribed in practicals may be set in the papsr.

**Recommended**

1. L Pauling : College Chemistry  
Freeman (Vakils, Feffer & Simons)—  
1964.

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*Provisional Syllabus for First Year T.D.C.*

## PAPER II

*(Organic Chemistry)*

*Standard Expected* : As given in Ferguson. 'Organic Chemistry' (Excluding applications of Spectroscopy) and with limitations indicated below.

*Note* : Two questions will be asked from Sec. A and Four questions from Sec. B.

## Section 'A'

	No. of Proposed Lectures
1. Tetravalency of carbon atom; Kekule & Van't Hoff-Le Bel theories; Nature of covalent bond; Electronic formulae of compounds prescribed insyllabus; Orbital representation of covalent bond; Concept of bond length, bond strength and bond angle; Hybridization; Orbital ststructure of methane, ethylene & methane, ethylene & acetylene.	8
2. Electronegativity and formal charge; Polarity of covalent bond : Free radicals & ions; Acids & bases; Inductive sffect; Electrophilic & nucleophilic 'reagents.	
3. Classification of organic compounds; Nomenclature; Homologous series; Functional group; Isomerism (position, chain, functional, metamerism).	3

## Section 'B'

- General methods of preparation, properties and uses of the following classes of compounds *with emphasis on points noted against each of them.*

*(a) Aliphatic Hydrocarbons :*

Alkanes (Upto 5 carbon atoms) : Isomerism of butanes and pentanes; substitution reaction (free radical mechanism), pyrolysis; Alkanes : Ethylene; Electrophilic additions (mechanism); Markownikoff's Rule. 3

Alkynes : Acetylene; Substitution reactions, Polymerisation; Synthetic & industrial uses of acetylene.

Petroleum : As source of hydrocarbons, cracking, knocking, octane number synthetic Petrol. 2

*(b) Halogen Derivatives :*

Mono-, di-, tri-derivatives (excluding unsaturated) upto 2 carbon atoms; Freons; Haloform reaction, synthetic uses of alkyl halides Polarity of carbon-halogen bond; Introduction to the concept of nucleophilic substitution and of carbonium ion. 6

*(c) Preparation & synthetic uses of Grignard reagents.* 2

*(d) Alkanols : (Upto 2 carbon atoms) :*

Classification of alcohols; Industrial preparation of methanol, ethanol, absolute alcohol & power alcohol; Fermentation; Hydrogen bonding and association in alcohols. 5

*(e) Ethers : Diethyl ether.* 1

*(f) Alkanals & Alkanones :*

Formaldehyde, Acetaldehyde & Acetone; Polarity of carbon-oxygen double bond; Concept of nucleophilic addition (HCN addition, mechanism); polymerisation & condensation reactions (No mechanism); 5

similarity&distinction between aldehydes & ketones.

(g) *Alkanoic Acids (Monocarboxylic acids)* :

Industrial preparation of formic and acetic acids; ionization and resonance; Effect of substituents on acid strength. 6

Derivatives of fatty acids : acetyl chloride, acetamide, acetic anhydride, ethyl acetate.

(h) *Aliphatic amines* : Methyl and ethyl amines; their basic nature; hypobromite reaction; urea. 2

(i) Simple properties of glucose, fructose and Sucrose. 2

(j) Coal Tar as a source of aromatic compounds; Characteristic of aromatic compounds; Preparation and properties of Benzene (structure excluded). nitrobenzene, aniline & phenol. 4

**Note**—Simple problems based upon structures and reactions of compounds prescribed in the syllabus may be given.

*Provisional Syllabus for Second Year T.D.C.*

## PAPER I

## (Inorganic Chemistry)

Two questions will be asked from Section 'A' and Four questions from Section 'B'.

## Section 'A'

No. of  
Proposed  
Lectures

1. *Study of periodic Table :*

Extranuclear configuration of elements (Pauli's exclusion principle, Hund's rule, aufbau principle). Stabilities of half filled orbitals. Energy units. Ionisation potential, electron affinity, electronegativity. Bond length, bond energies, ionic and atomic radii. Detailed study of periodicity in physical Chemical Properties of elements. 10

2. *The Nature of Chemical Bond :*

Ionic bond, lattice energy, Born-Haber cycle, ionic radii and crystal structure (general considerations coordination number, radius ratio-four fold coordination, six fold coordination and eight fold coordination). Vander Waal's forces, Solubility of ionic compounds. 12

Covalent bond-electron pair concept, valence bond approach to molecular structure. Partial ionic character of covalent compounds. Fajan's rule, resonance, hybridisation of orbitals (involving s, p and d orbitals), shapes of molecules, Hydrogen bonding,

Clathrate compounds. Electron deficient compounds.

## Section 'B'

3. *Hydrogen :*

Position of hydrogen in the periodic table. Isotopes of hydrogen-deuterium and Tritium. 4

Ortho and para hydrogen. Atomic hydrogen.  
Nascent hydrogen. Hydrides.

4. *Inert Gases :*

Discovery of inert gases. Position in the  
Periodic Table. Isolation of Argon and Helium.  
Compounds of inert gases.

3

5. *Boron :*

Electronic structure and bonding. Electron  
deficiency and acceptor behaviour. Comparison  
with silicon and aluminium. Occurrence, iso-  
lation and compounds of boron. Borides. Oxy-  
compounds of boron. Halides of boron. Boranes.

5

6. *Carbon and Silicon :*

Allotropy of carbon diamond, graphite.  
Compounds of graphite. Carbides.

6

Group trends and stereochemistry of carbon  
and silicon compounds. Elementary study of  
carbonyls silicones and silicates.

7. *Group V Elements :*

Group trends. Covalence and stereochemi-  
stry of simple compounds. Hydrides, halides,  
oxides and sulphides of nitrogen and phosphorus  
(in detail) and of other elements. Fixation of  
nitrogen, Fertilizers. Hydrides, oxides, oxyacids  
and halogen compounds of nitrogen. Compounds  
of phosphores, halides, oxyhalides, oxides and  
oxyacids of phosphores.

8. *Group VI Elements :*

Group trends. Paramagnetic nature of  
oxygen. Hydrogen peroxide, peroxy compounds  
of sulphur, Structure of elemental sulphur.  
Hydrides, halides, oxyhalides, oxides and oxy-  
acids of sulphur.

5

Thiosulphuric acid and its salt. Thionic  
acids and their salts.



9. *Group VII :*

Group trends. Oxides, oxyacids and their salts of halogens. Positive oxidation. State of halogens, Interhalogen compounds, Fluorine, unique position of fluorine. Occurrence. isolation and properties of fluorine. Hydrogen fluoride and its salts Fluorides. 6

*Note :* Questions based on syllabus prescribed in practicals may be set in the paper.

## II Year T.D.C. (Organic Chemistry)

## Paper II

*Standard Expected* : As given in Ferguson and Morrison & Boyd (Excluding applications of Spectroscopy) and with limitations indicated below.

*Note* : Four questions will be asked from Section 'A' and Two questions from Section 'B'.

## SECTION 'A'

No. of  
Proposed  
Lectures.

Chemistry of the following with special emphasis on points noted against each. Students are expected to be familiar with the nomenclature and isomerism of the *first five members of every homologous series*.

- |  |   |
|--|---|
| 1. <i>Alkenes &amp; Alkynes upto 5 five carbon atoms</i> :   | 3 |
| Electrophilic additions; Markownikoff's Rule; Peroxide effect.   |   |
| 2. <i>Dienes</i> : Stability; Structure; Molecular Orbital Concept; Special properties of conjugated dienes; Butadiene & isoprene; Elementary treatment of Rubber and artificial polymers. | 3 |
| 3. <i>Halogen Derivatives</i> : Alkyl halides (Containing more than 2 carbon atoms); Vinyl and Allyl halides; Structure vs. Reactivity.  | 3 |
| 4. (a) <i>Alkanols</i> : Propanols; butanols and pentanols; Distinction between primary, secondary and tertiary alcohols; Enzymes and fermentation.  | 5 |
| (b) <i>Diols</i> : Ethylene glycol.  |   |
| <i>Triols</i> : Glycerol   |   |

- |   |   |
|---|---|
| 5. <i>Oils &amp; Fats</i> : Properties; Saponification value; iodine value; R.M. Value; Hydrogenation; Soaps; Detergents & Waxes.   | 2 |
| 6. <i>Alkanals &amp; Alkanones</i> : Higher members upto $C_5$ ; Polymerization and condensation reactions.   | . |
| 7. <i>Derivatives of unsaturated hydrocarbons</i> : Alkyl alcohol, acrolin and acrylic acid; crotonaldehyde & crotonic acid.  | 2 |
| 8. <i>Sulphur Compounds</i> : Mercaptans & thioethers   | 2 |
| 9. <i>Acids</i> : (i) Dibasic : Oxalic, malonic, succinic, glutaric, adipic.  | 8 |
| (ii) Hydroxy : Glycollic, lactic, tartaric, malic, citric.  |   |
| (iii) Unsaturated : Fumaric & Maleic  |   |
| (iv) Amino Acids : Introductory treatment, relation to proteins.  |   |
| 10. <i>Nitrogen Compounds</i> : Alkyl cyanides & isocyanides; Nitroalkanes, alkyl nitrites; Diazomethane. Amines : Classification, separation, quaternary ammonium compounds. | 6 |

## SECTION 'B'

- |  |   |
|--|---|
| 11. <i>Carbohydrates</i> : Classification; general reactions of monosaccharides; construction of glucose & fructose and sucrose; Properties of starch and cellulose. | 5 |
| 12. Compounds containing Reactive Methylene Group; Preparation and synthetic uses of cyanoacetic. Malonic and Acetoacetic esters; Keto-enol tautomerism.             | 5 |
| 13. <i>Isomerism</i> :   |   |
| (a) Concept of rotation around single bonds; illustrations of conformations of ethane.   | 7 |
| (b) Geometrical Isomerism : Elementary treatment   |   |

- (c) Optical Isomerism : Criteria of optical activity; Optical activity of compounds containing one & two asymmetric carbon atoms; Diastereoisomers; Racemization, Resolution; Asymmetric Synthesis; Walden inversion; Absolute & Configuration.

*Note* :—Problems on structure and constitution of organic compounds based upon chemical reactions.

*Syllabus for Second Year T.D.C.*

## PAPER III

## (Physical Chemistry)

Two questions will be asked from Section 'A' and Four questions from Section 'B'.

## Section 'A'

No. of  
proposed  
lectures.

7. *Structure of an atom :*

*Quantum numbers :* Principal, azimuthal, magnetic and spin quantum numbers. Zeeman effect, arrangement of electrons, shape and orientation of atomic orbitals, 9

*Wave Mechanics :* Elementary concept of wave-mechanics, photoelectric effect, Compton effect, Uncertainty principle, de Broglie's equation, Davison and Germer's experiment, Schrodinger equation (no derivation), significance of  $\psi^1$  and  $\psi^2$ .

2. *Nuclear Chemistry :*

A brief account of natural radioactivity 9  
( $\alpha$ -particles,  $\beta$ -particles,  $\gamma$ -rays), detection and measurement of radioactivity, disintegration, half life period, average life, radioactive equilibrium, transmutation of elements, theory of radioactivity, group displacement law, artificial radioactivity, Nuclear fusion, Nuclear fission, transuranic elements, application of radioactivity and radioisotopes (as tracers, in analysis, reaction mechanism through tracer chemistry, in medicine, in biological field, in agriculture and in industry).

*Isotopes :* Packing fraction, separation of isotopes, chemical methods, and Aston's mass spectrographs, Isobars.

## Section 'B'

3. *Ideal and real gases :*

Postulates of kinetic theory, derivation of kinetic equation and deduction of the following :—  
 Boyles law, Charles law, Graham's law and Avogadro's hypothesis. Maxwell's distribution law of velocities, specific heats of gases, specific heat ratio, Ideal gas equation, causes of deviations, molecular attraction, excluded volume, Van der Waal's equation of state. Critical phenomena, Andrew's experiment, determination of critical constants, continuity of state, Van der Wall's equation and critical phenomena, reduced equation of state, law of corresponding states, liquification of gases, other equation of states—Clausius equation, Berthelot's equation, Dieterici's equation and general equation of state.

10

4. *Solutions :*

*Solution of gases in liquid:* Henry's law, Experimental verification of Henry's law, deviation from Henry's law, effect of temperature.

*solution of solids in liquids :* Distribution law, application of distribution law to association. dissociation and complex compounds formation, extraction.

4

5. *Theory of dilute solution :*

Osmosis, Osmotic pressure, its determination by Berkeley and Hartley's experiment, Laws of osmotic pressure (Vant Hoff's theory), Colligative property, vapour pressure, lowering of vapour pressure, Raoult's law, relation between osmotic pressure and lowering of vapour pressure, determination of lowering of vapour pressure by Ostawald & Walker's dynamic method, depression in freezing point, its determination by

8

Beckmann's method, elevation in boiling point, its determination by Landsberger's method. Vant's Hoff factor, molecular weights.

#### 6. *Thermodynamics :*

Introductory concept of thermodynamics, explanation of commonly occurring terms, systems, isolated systems, state of system, extensive and intensive properties, internal energy, heat content or enthalpy heat capacity of a system, First law of thermodynamics, Heat of reaction at constant volume and at constant pressure. variation of heat of reaction with temperature.

*Thermochemistry :* Heat of combustion, determination of heat of combustion by Bomb calorimeter, heat of formation, heat of neutralisation and its determination, heat of solution; heat of ionisation and heat of hydration, thermochemical equation, Hesse's law of constant summation, calculation of bond energy from thermochemical data.

#### 7. *Heterogeneous equilibria :*

Application of law of mass action to the following equilibria: (i) Dissociation of  $\text{CaCO}_3$ , (ii) dehydration of copper sulphate. 10

*Phase rule:* Meaning of terms involved in phase rule equation, one component system with special reference to water, sulphur and carbon dioxide, condensed system, two component systems with special reference to systems such as lead-silver, KI and water, and aniline-hexane, eutectic mixture.

Distillation of binary liquids : (i) miscible (ii) partially miscible (iii) immiscible liquids, azeotropic mixture.

*Note* : Numerical problems based on the above syllabus may be set in the paper.

*Suggested References :*

1. Physical Chemistry by A.J. Mee.
2. Physical Chemistry by Gordon Barrow.
3. Elements of Physical Chemistry by Glasstone.
4. Physical Chemistry by Moore.



*Third Year T.D.C.*

## PAPER I

## (Inorganic Chemistry)

Two questions will be asked from Section 'A' and Four questions from Section 'B'.

## Section 'A'

No. of  
Proposed  
Lectures.

1. *Transition Elements :*

Electronic configuration. Position in the Periodic Table. Trends in variation of properties. General characteristics of transition elements. Magnetic properties of transition elements. Paramagnetism, diamagnetism. Magnetic susceptibility. Valence bond approach for metals. Metallic bond. Crystal structure of metals, bond orders, hybridisation for metallic bonding. Inter metallic compounds. Interstitial compounds.

10

2. *Chemistry of Coordination Compounds :*

Early development of coordination chemistry, Werner's postulates. Symmetries of four and six Coordination numbers. Structure, isomerism and nomenclature of complex compounds of metal having above coordination numbers. Valence bond theory for explaining metal ligand bonding, stereochemistry and magnetic properties of coordination compounds.

10

## Section 'B'

3. *Study of some transition elements :*

Chemistry of titanium, vanadium, Technisium Zirconium, cobalt, nickel, molybdenum, tungsten, palladium, platinum in different oxidation states.

10

4. The general study of Lanthanides, electronic structure, occurrence, oxidation states, magnetic properties. The Lanthanide contraction. Chemistry of compounds of cerium. 6
5. Chemistry in non-aqueous solvents with special reference to Chemistry in liquid ammonia and liquid sulphur dioxide. 6
6. Study of organometallic compounds of Lithium, Magnesium and Tin. 6
7. Precipitation from homogeneous medium, purity of precipitate, co-precipitation, post precipitation, conditions of precipitation, washing of precipitate, ignition of precipitate. Errors in quantitative analysis, classification of errors, minimisation of errors, precision, accuracy, significant figures. 6
8. Simple organic reagents (oxine, dimethyl glyoxime cupferron,  $\alpha$  nitroso  $\beta$  niphthal, phenylarsonic acid and nitron) in Inorganic analysis. 6

## III Year T.D.C.

## PAPER II

## (Organic Chemistry)

*Standard Expected* : As given in Forguson and Morrison & Boyd (excluding applications of Spectroscopy) and with limitations indicated below.

*Note* : Four questions will be asked from Section 'A' and two questions from Section 'B'.

## Section 'A'

No. of  
Proposed  
Lectures.

1. Benzene and its homologues ( upto xylenes ) 10  
Structure of Benzene (Resonance and orbital picture); Concept of Aromaticity; The Huckel  $4n+2$  Rule; Orientation and directive influence of substituents; Elementary treatment of electrophilic and nucleophilic aromatic substitution; Nomenclature and isomerism of benzene derivatives.
2. Preparation, properties and use of the following aromatic compounds *with emphasis on (i) relation with aliphatic analogues and (ii) important name reactions.*
  - (a) Mono-and di-halogen derivatives : Side chain & nuclear substitution. 3
  - (b) Mono-, di-, and tri-Nitro derivatives : of benzene and toluene. 3
  - (c) Amino Compounds : Aniline, methylaniline, dimethyl-aniline. toluidines, benzylamines, phenylene-diamines. 4
  - (d) Diazonium salts : Synthetic Uses and constitution of benzene diazonium chloride; phenyl hydrazine : diazoamino benzene; introduction to azo-dyes. 4

- |   |   |
|---|---|
| (e) Benzene and toluene sulphonic acids; their sulphonyl chlorides saccharin; sulphanilic acid, sulphanilamide, introduction to sulfa drugs | 4 |
| (f) Phenols : Mono-, di-, trihydric phenols, Picric acid.   | 4 |
| (g) Alcohols : Benzyl alcohol.  | 1 |
| (h) Aldehydes & Ketones : Benzaldehyde; salicylaldehyde; vanillin; acetophenone, benzophenones, quinones.                                   | 4 |
| (i) Acids & their Derivatives : Benzoic, benzamide, Phenylacetic, cinnamic, salicylic, phthalic, phthalic anhydride, anthranilic.           | 4 |

### Section 'B'

- |  |   |
|--|---|
| 3. Cycloalhanes, Simple-members upto cyclo hexane. Decalin Strain. Theories and Theory of strainless rings   |   |
| 4. Polycyclic aromatic compounds : Diphenyl, Naphthalene including structure, Diphenylmethane, Triphenylmethane, and their more important derivatives. | 5 |
| 5. Heterocyclic Compounds Containing one hetero atom : Pyrrol, Thiophene, Furane, Pyridine. Their aromatic character and simple derivatives.           | 8 |

*Note* : Problems based upon reactions and structures of compounds prescribed in syllabus.

*Syllabus for III Year T.D.C.*

## PAPER III

## (Physical Chemistry)

Two questions will be asked from Section 'A' and Four questions from Section 'B'.

## Section 'A'

No. of  
Proposed  
Lectures.

1. *Conductance and ionic equilibria :*

Conductivity and its determination, specific equivalent and molar conductivities, effect of dilution on conductivities, migration velocity of ions, transport number and its determination by Hittorf's method, moving boundary method and E.M.F. method, Kohlrausch's law, application of conductance measurement : determination of (i) degree of dissociation of weak electrolytes, (ii) solubility of sparingly soluble salts, (iii) hydrolysis constant, (iv) dissociation constant of weak acids and weak bases, (v) ionic product of water, (vi) conductometric titrations.

12

*Ionic equilibria.* Arrhenius theory of ionisation, Ostwald's dilution law, experimental verification of the law, limitation of Arrhenius theory, activity and activity coefficients, elementary treatment of Debye Huckel theory of strong electrolytes (no mathematical treatment), ionic strength.

2. *Electrochemistry :*

Galvanic cells, reversible and irreversible cells, Nernst solution pressure theory, electrical double layer, single electrode potential and half cells electrode reactions, reversible electrodes (hydrogen electrode, silver, silver chloride electrode, Calomel electrodes). oxidation reduction electrode (quinhydrone electrode), glass elec-

8

trode, standard electrode potential, electro-chemical convention, E.M.F. and its measurement, Nernst equation (no thermodynamic deduction) concentration cells, salts bridge, measurement of pH.

3. *Thermodynamics* : Second law of thermodynamics, entropy and its physical significance, molecular basis of entropy, work and free energy functions, Entropy changes in reversible and irreversible processes, Gibbs Helmholtz equation. 5

4. *Crystal structure* :

Crystalline and amorphous state, isotropy and anisotropy, symmetry, plane of symmetry, axis of symmetry and centre of symmetry, designation of crystals, law of rational indices, classification of crystals spaces lattice. unit cells simple, face centred and body centred cubic lattices, diffraction of x-rays by crystals, Bragg's equation, experimental methods (rotating crystal method, powder method) crystal structure of sodium chloride (Rock salt), KCl, graphite and diamond. 12

5. *Chemical Kinetics* :

Rate of reaction, specific reaction rate and its significance, factors influencing rates of reaction, order and molecularity of reactions, reaction of first order, second order and third order, determination of order of reaction, importance of order in relation to mechanism of reactions, temperature dependence of reaction rates, activation energy, Arrhenius theory of reactions rates, activated complex. 10

6. *Spectroscopy* :

Dispersion of white light through prism, visible spectrum, optical spectroscope, nature of electromagnetic radiation, definition of terms wavelength frequency and wave number, absor- 13

ption and emission spectra, basic principle of spectrometer (outlines only).

Electronic, vibrational and rotational transitions (No mathematical details) Brief outlines of ultra violet visible spectroscopy (Lambert and Beer's law extinction, molar extinction coefficient and max, simple chromophores, auxochromes, K-bond, R-bond, B-bond, bathochromic and hypsochromic shifts, hyperchromic hypochormic effects), illustrated with simple examples; colour in transition metal compounds.

Brief outlines of infra-red spectroscopy, (modes of vibrations (symmetric, asymmetric, scissoring rocking, wagging and twisting vibrations), Absorption of simple and common functional groups C=O vibrations in ketones, carboxylic acids, amides and esters, O-H vibrations in alcohol, water and phenol C-H vibrations in alkane, benzene and simple aromatic substituted compounds, N-H vibrations in amines, C-X stretching vibration in halogen compounds) illustrated with simple examples.

*Note* :—Numerical problems based on the above syllabus may be set in the question paper.

*Suggested References :*

- (1) Physical Chemistry by A.J. Mee
- (2) Physical Chemistry by Gordon Barrow
- (3) Elements of Physical Chemistry by Glasstone
- (4) Physical Chemistry by J.W. Moore.

*I Year T.D.C.*

## Practical Works

Students are expected to perform the following experiments in the laboratory. An account of each experiment must be written by the students in a special note-book, which will be examined by the examiners. This note-book, should be kept in the charge of laboratory instructor and each account of an experiment should be corrected, signed and dated by him. The Principal of college will be responsible for the production of this note-book when demanded by the proper authorities.

The practical course is as follows :—

1. Analysis of mixture (soluble in water and hydrochloric acids) of four radicals, two basic and two acidic, not containing two metals of the same group and not containing any interfering acidic radicals or the following combination :

- A. Sulphite and sulphide.
- B. Sulphite and Sulphate.
- C. Sulphide and Sulphate.
- D. Nitrite and Nitrate.
- E. Nitrate and Bromide.
- F. Carbonate and Sulphate.
- G. Nitrite and Iodide.
- H. Chloride and Bromide.
- I. Bromide and Iodide.
- J. Iodide and Chloride.

2. Titration of potassium permanganate with oxalic acid or with ferrous iron. Preparation of standard solution weighing oxalic acid and ferrous ammonium sulphate required for the above volumetric exercises.

3. Qualitative detection of nitrogen, sulphur, chlorine bromine and iodine present alone or together in an organic compound.

4. Determination of melting and boiling points of organic compounds.



5. Simple gravimetric experiments such as change in mass on oxidation of magnesium, change of weight on heating barium chloride, copper carbonate, and ferrous ammonium sulphate.

*Note* :—No. of 4 and 5 of the above do not form part of examination. Students will have *viva-voce* test also in the practical examinations.

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## *II Year T.D.C.*

### PRACTICAL

The duration of practical examination will be of five hours and will comprise the following exercises.

1. Qualitative analysis of an inorganic mixture containing six radicals (excluding insolubles).

Ammonium, Potassium, Magnesium, Calcium, Strontium, Barium, Zinc, Manganese, Cobalt, Nickel, Aluminium, Chromium, Iron (Fe), Copper, Bismuth, Cadmium, Arsenic, Antimony, Tin, Lead, Mercury, Silver, as basic radicals.

Carbonate, Nitrite, Sulphide, Sulphite, Sulphate, Chloride, Bromide, Iodide, Nitrate, Acetate, as acid radicals.

2. Volumetric exercises :

(i) Acidimetry and alkalimetry :

a. Iodometric estimation of copper salts, potassium dichromate, potassium permanganate.

b. Iodometric determination of arsenite.

## (iii) Redox reactions;

- a. Standardisation of potassium permanganate with oxalic acid, sodium, oxlate, potassium tetraoxalate.
- b. Titration of ferrous iron with potassium permanganate and dichromate using internal and external indicators.

## (iv) Argentometry : Titration against chloride or thiocyanate ions in neutral solutions.

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*III Year T.D.C.***PRACTICAL**

The duration of practical examination will be of eight hours and will comprise of the following exercises.

1. Gravimetric estimation of copper, Silver, lead, zinc, iron, Chromium, barium, sulphate and chloride.
2. Qualitative analysis of an inorganic mixture containing six radicals (prescribed for T.D.C. II) along with Phosphate, borate, fluoride and oxalate preferably by semimicro technique. The mixture may contain insoluble substances also.
3. Systematic identification of an organic compound from the following list :—

Benzene. Toluene. Naphthalene, Methyl Alcohol  
Ethyl Alcohol, Butyl Alcohol, Benzyl Alcohol,  
Ethylene glycol.

Phenol. 1—Naphthol, Resorcinol, Pyrogallol,  
o-Cresol, m-Cresol, p-Cresol, Hydroquinone.

Acetaldehyde, Formaldehyde, Chloralhydrate, Acetone, Acetophenone.

Acids : Formic, Acetic, Oxalic, Benzoic, Succinic Citric, Tartaric, Salicylic, Phthalic, Adipic, Cinnamic.

Ethyl Acetate, Ethyl Oxalate, Ethyl Benzoate, Methyl Oxalate, Methyl Salicylate, Phenyl Benzoate, Glucose, Fructose, Cane-Sugar, Starch.

Aniline. o-Toludine, p-Toludine, 1-Naphthylamine. Diphenyl amine, Dimethyl aniline.

Urea, Acetamide, Benzamide, Acetanilide.

Nitrobenzene, m-Dinitrobenzene, p-Nitrotoluene.

1-Nitronaphthalene, o-Nitrophenol, p-Nitrophenol, Chloroform, Carbontetrachloride, Iodoform, chlorobenzene, Bromobenzene, p-dichloro and p-dibromo-benzene.

The identification will include (i) the determination of their boiling or melting points, (ii) the detection of elements contained (iii) the application of tests characteristics of the groups contained and of the compounds themselves and (iv) wherever possible the preparation of a solid derivative in a pure condition.

Students will be given two compounds for identification.

*I Year B.Sc., B.Ed.*

Chemistry I PAPER

(Inorganic & Physical)

Max. Marks 50

Internal 10

External 40

Duration 3 hours :

*Unit 1 Atomic structure :*

Discharge of electricity in gases, cathode rays, electrons, protons and neutrons, positive rays, Rutherford model of atom. Elementary ideas about structure of nucleus, main concept of isotopes scheme of arrangements of extra nuclear electrons, shells and sub-shells.

*Unit 2 Electronic theory of valency :*

Principle features of the theory, Electrovalent, Covalent and semi-polar bond and singlet linkage, variable valency. Reduction/Oxidation state.

*Unit 3 Periodic classifications :*

Atomic number. Modern periodic table based upon electronic configurations, Atomic Radii, Transition elements, zero group, alkali and alkaline earth metals, Rare earths, their position and inclusion at one place in the periodic table.

*Unit 4 Electro Chemistry :*

Faraday's laws of electrolysis, Avogadro's number and Kohlrausch's laws. Arrhenius theory of electrolytic dissociation, specific, equivalent and molar conductiveness, Elementary treatment of the following; degree of dissociation. Ostwald's dilution law, strong and weak electrolytes. Solubility product and its application in analytical chemistry.

*Unit 5* General principles of metallurgy and methods used for the extraction of metals from various types of various types of furnaces required in metallurgical operations.

**Unit 6 *Sodium and Potassium* :**

Preparation properties and uses of these metals, hydroxides, chlorides, nitrates, carbonates, and sulphates. Manufacture of sodium hydroxide and sodium carbonate.

**Unit 7 Copper :** outline of its metallurgy, properties and uses. The oxides, chlorides, nitrate and sulphides of Copper. Silver outlines of its metallurgy properties and uses. The oxide, chloride, bromide, iodide and nitrate of the metal. Photography and silvering of mirrors.

**Unit 8 Aluminium :** outlines of its metallurgy, properties and uses. The oxide, chloride and sulphate of the metal. Alums.

**Unit 9 Iron,** outlines of its metallurgy, cast iron, steel and wrought iron. oxides, chlorides, sulphates and sulphides of iron.

*I Year B.Sc. B.Ed.*

## PAPER II

## (Organic Chemistry)

Max. Marks 50

Internal 10

External 40

Duration 3 hours

- Unit 1 Growth and scope of the organic chemistry (vital force Theory. Wohler synthesis of urea-areas it covers in organic world etc.)
- Unit 2 Purification of organic compounds. Tests of purities of compounds, Melting points and boiling points. Distillation-fractional and vacuum, crystallization-sublimation etc.
- Unit 3 Tetra valency of carbon from point of electronic theory of valency-Nomenclature of compounds-Geneva and trivial, structural formula-isomerism.
- Unit 4 Detection and estimation of elements present in the organic compounds, Empirical formula and molecular formula.
- Unit 5 Aliphatic Hydrocarbons-Saturated upto five carbon atoms-Unsaturated upto three carbon atoms Homologous series among the hydrocarbons.
- Unit 6 Petroleum-Modern fuel, fuel value-octane number, cracking, pyrolysis, hydro formation synthetic fuel etc.
- Unit 7 Mono, di, tri and tetra halogen derivatives of hydrocarbons, their reactivity-Polar and non-polar bond.
- Unit 8 Structural formula, preparation and properties of Methyl and ethyl alcohol, Formaldehyde, Acetaldehyde, Formic acid, acetic acid, acetone and methylamine.

Unit 9 Preparation and properties of Benzene, Toluene, Nitrobenzene, Nitro toluene, Aniline, Benzoic acid, Benzophenone, Benzyl alcohol, Benzaldehyde.

Unit 10 Manufacture of sugar, vinegar, soap, coal tar distillation.

*I Year B.Sc., B.Ed.*

## Chemistry Practicals

Max. Marks 50

External 25

Internal 25

Duration 6 hours :

Unit 1 Volumetric, Analysis-Calibration of apparatus, Redox titration of using oxalic acid. Potassium permanganate and Potassium dichromate.

Unit 2 Analysis of a mixture (soluble in water or hydrochloric acid) of four radicals, two basic and two acidic, not containing two metals of the same group and not containing any interfering acidic radicals or the following combinations :

- (a) Sulphite and sulphide.
- (b) Sulphite and Sulphate
- (c) Sulphide and sulphate
- (d) Nitrite and Nitrate
- (e) Nitrate and Bromide
- (f) Carbonate and sulphite
- (g) Nitrate and Iodide
- (h) Chloride and Bromide
- (i) Bromide and Iodide
- (j) Iodide and Chloride
- (k) Carbonate and Oxalate.

Basic radicals : Ag, Pb, Hg (ous), Hg (ic), Cu, Bi, Cd, As, Sb, Sn (ous), Sn (ic), Fe (ic), Cr, Al, Ni, Co, Mn, Zn, Br, Sr, Ca, Mg,  $\text{NH}_4$ , K.

Acidic radicals :  $\text{CO}_3$ ,  $\text{SO}_3$ ,  $\text{NO}_3$ ,  $\text{CH}_3\text{COO}$ ,  $\text{NO}_2$ , Cl, Br, I,  $\text{SO}_4$ ,  $\text{PO}_4$ ,  $\text{C}_2\text{H}_4$ ,  $\text{BO}_3$ .

Unit 3 Qualitative detection of nitrogen, sulphur, chlorine bromine and iodine present alone or together in an organic compound. Two halogens not given together.



Unit 4 Equivalent weight of Cu, Mg and silver.

Unit 5 Preparation of the following :

- (a) Chlorine and Bromine
- (b) Ammonia, HCl gas, Nitric acid.
- (c) Nitrous oxide and Nitric oxide.

Unit 6 Brief outline of preparing reagents used for qualitative analysis as listed in Unit 2 and 3.

*II-Year. B.Sc., B.Ed.*

PAPER III

(Inorganic)

Max. Marks 34

Internal 7

External 27

Duration 3 hours.

A comparative study of group zero, one, two, three and seven from the point of view of periodic classification with a detailed study of the following elements and their compounds.

*Compounds* : (i) Inert gases : discovery of Helium and Argon, properties and uses.

(ii) Hydrogen: manufacture and different forms.

(iii) Lithium\*, gold\*, Beryllium\*, Manganese\*, Zinc\*, Cadmium\*. Mercury\*, Radium, Boron, Halogens and Manganese, calcium Strontium. General treatment.

(Metallurgy of elements—Li, Au, Be, Mg, Zn, Hg, Mn and Cd) Detailed study of following compounds.

*Elements* : (i) Hydrides, halides, oxides, oxyacids of non-metals mentioned above.

(ii) Hydrides, halides, oxides, hydroxides sulphides, sulphates, nitrates, and carbonates of metals studied above (simple valency bond, structure of oxides and oxy acids, and electronic structure of simple compounds are also included.)

Chemical principles involved in the manufacture of cement, potassium permanganate, Bleaching powder, Development of alkali industry.

*II-Year B.Sc., B.Ed.*

## PAPER IV

## (Organic Chemistry)

Max. Marks 39

Internal 7

External 26

Duration-3 hrs.

- Unit 1 Polyhydric alcohols, Ethylene glycol, glycerol, its structure, glyceryl tri-nitrate.
- Unit 2 Di and tri carboxylic acids-Preparation, properties and uses of oxalic, succinic, malonic, Tartaric, and citric and Aldehyde and Ketonic acids (saturated and unsaturated) Preparation and synthetic uses of malonic ester and Acetoacetic ester, ketoenol Tautomerism.
- Unit 3 Substituted Fatty acids-Hydroxy, Halo and Amino acids general characteristics.
- Unit 4 Derivative of fatty acids Acid chloride. Acetyl chloride and Benzoyl chloride. Acid Anhydride-acetic anhydride and phthalic anhydride acid amides-Acetamide and Benzamide. ester-with organic and inorganic acids-oil, fats and waxes (simple treatment).
- Unit 5 Aliphatic and Aromatic-primary, secondary, tertiary amines. Toluidines, Quaternary ammonium compounds (one example of each) Preparation and properties.
- Unit 6 Preparation, properties and uses of diethyl ether. metamerism. Organo-metallic compounds containing magnesium-their synthetic uses.

Unit 7 Stereo-chemistry geometrical and optical isomerism, Resolution and Racemization.

Unit 8 Carbonic acid derivative-Carbonyl chloride, urea.

Unit 9 Cyanogen derivatives cya-nogen, hydrocyanic acid, nitriles and isonitriles.

Unit 10 Organometallic compounds-containing magnesium and their applications.

Unit 11 Derivatives of unsaturated hydrocarbons-Allyl derivatives. Acrolein and acrylic acid.

## III Yr. B.Sc. B. Ed.

## PAPER V

(Physical Chemistry)

Max. Marks 33

External 27

Internal 6

Duration : 3 hours.

1. *The gaseous state of matter* : Ideal gases, kinetic theory of gases, Fundamental equation from kinetic theory and its use in deducting as laws; gas equations, Graham's law of diffusion. Avogadro's law and specific heats of gases. Derivation from gas laws. Continuity of state, Vander walls equation of state. Critical phenomenon. Liquifaction of gases, law of corresponding states. Vapour density. Molecular weights. Thermal dissociation.

2. *Solution* : Solutions in genaral, osmosis and osmotic pressure, Elementary treatment of the theory of dilute solutions, lowering of freezing point and elevation of boiling point. Experimental determination of modicular weights of the solute, abonormal molecular weight of solute. Vant Hoff's '1'.

3. *Chemical equilibrium* : Reversible and irreversible reactions, laws of mass action to Homogenous and heterogenous reactions, Le-chatellier's principle and its simple applications.

4. *Thermo-chemistry* : Hess's law of constant heat summation, heats of (i) Reaction (ii) Combustion at constant pressure and constant volume (iii) Formation (iv) Neutralization, solution (v) dilution and (vi) ionization. Temperature coefficient of heat of reaction.

5. *Catalysis* : Characteristics of catalysis, Homogenous and Heterogenous catalysis. Auto catalysis, Catalytic poisons Enzymes as catalysis, Elementary treatment of theory of catalysis and its industrial application.

5. *Colloidal State of matter* : Colloids and crystalloids. purification outline of optical and electrical properties, sta-

bility, coagulation, peptisation, protection. Lyophobic, lyophilic solutions.

7. *Liquid state of matter* : Vapour pressure, molecular volume, surface tension, parachor, Molecular weight of pure liquids, viscosity and molecular viscosity, Refractive index and molecular refraction, optical activity, Absorption spectra. Relationship between these physical properties and chemical constitution of substances.

### Practicals

1. Gravimetric estimation of Barium and Silver.
2. Testing of the functional group as carboxylic, alcoholic, Phenol, aldehydes and ketones in organic compounds.
3. Qualitative analysis of an inorganic mixture containing six radicals (Interfering radicals) excluding insoluble (All radicals of the first year).
4. Redox titration of ferrous ion with potassium permanganate and dichromate using internal and external indicators.
5. Argentometry against potassium thiocyanate and chloride ion.
6. Iodometric estimation of copper salts, potassium dichromate-

*III Year B.Sc. B.Ed.***Practical (Chemistry)**

Total Marks 50

Internal 25

External 25

*Duration 10 hrs.*

1. Gravimetric estimation of chromium, iron, copper, lead & zinc.
2. Qualitative analysis of six radicals including insoluble interfering radicals, preferably by semi-micro technique.
3. Determination of order of reaction of simple reactions.
4. Surface tension and viscosity of liquids.
5. Chromatographic separation of carbohydrates and coloured compounds.
6. Systematic identification of organic compounds from the following list :—

Benzene, toluene, naphthalene, methyl alcohol, ethyl alcohol, Benzyl alcohol, ethylene glycol.

Phenol, 1-naphthol, resorcinol, pyrogallol, o-cresol m-cresol, p-cresol, hydroquinone.

Acetaldehyde, formaldehyde, chloral hydrate, Acetone, Acetophenone, Benzophenone.

Acids: Formic, acetic, oxalic, benzoic, succinic, citric, tartaric, salicylic, phthalic, adipic, cinnamic.

Ethyl acetate, ethyl oxalate, ethyl benzoate, methyl oxalate, methyl salicylate, phenyl benzoate.

Glucose, fructose, cane-sugar, starch.

Aniline, o-toluidine, p-toluidine 1-naphthylamine, Diphenylamine, Dimethylaniline.

Urea, acetamide, Benzamide, Acetanilide.

Nitro benzene, m-dinitrobenzene, p-nitrophenol, p-nitro toluene. 1-nitronaphthalene, o-nitrophenol.

Chloroform, carbon tetra chloride, iodoform, Chlorobenzene, Bromobenzene, p-chlomet, p-dichloro and bromobenzene.

Identification, will include (i) Determination of M. Pt. & B. Pt. (ii) Identification of element and group (iii) preparation of solid derivative wherever possible.

7. On stage: synthesis of an organic compound (simple ones).
8. Purification of organic compounds, crystallization distillation etc.

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### *III Year B. Sc. B. Ed. (Pass)*

#### PAPER III

( Physical )

Max. Marks 33

Internal 7

External 26

*Duration—3 hrs.*

- Unit 1. Physico-organic chemistry-the idea of orbitals, hybridization, sigma and pi-bonding, inductive effect, Resonance effect, Electrophilic and Nucleophilic reaction. Steric effect.
- Unit 2. Structure and bonding in carbon compounds covalent bond, hybrid orbitals  $Sp^3$ ,  $Sp^2$ ,  $Sp$ , Resonance energy, delocalised electrons and delocalised energy.
- Unit 3. Physical properties and chemical constitution-dipole moment, parachor, molecular refraction, infra red and ultraviolet spectrum.



- Unit 4. Elements of instrumental chemical analysis-calorimetry and polarimetry, pH meters.
- Unit 5. Ionization potential. ionic and covalent Radii electro negativity.
- Unit 6. Chemical thermo dynamics.
- Unit 7. Solid state of matter-crystalline state of matter. Elements symmetry in crystals, classification of crystals in seven classes. Examples of crystal classes with their proper names from prescribed course in inorganic and organic chemistry.
- Unit 8. Chemical kinetics—First and second order. isolated reactions, temperature coefficient.
- Unit 9. Phase rule : Meaning of the terms involved in the rule. Application of the rule to systems of one component systems, water and sulphur. Eutic mixtures.
- Unit 10. Electro-chemistry : Molecular and equivalent conductivity, Kohlrausch's law and its application, Arrhenius theory of dissociation. Transport numbers, conductometric titration, ionisation constant of water, indicators and theory of indicators.
- 

III Year B.Sc.,B.Ed.

PAPER VI

(Inorganic)

Max. Marks 34

External 7

Internal 26

*Duration—3 hrs.*

- Unit 1. Comparative study of the elements of group 4, 5, 6 and 8 with regard to periodic classification. Meta-

llurgy of elements with star marks. Silicon, Titanium\*, tin, lead\*, Nitrogen, phosphorus, Arsenic, Antimony, Bismuth, Sulphur, Chromium, Uranium, iron, cobalt \*Nickel and platinum.

Unit 2. Hydrides, halides, oxides and oxyacids of silicon, nitrogen, phosphorus and sulphur Hydrides, halides, oxide, hydroxides, sulphides sulphates and carbonates of tin, titanium, lead, arsenic, antimony, bismuth, iron, cobalt, nickel and platinum.

Unit 3. Chemical principles involved in manufacture of glass, fuel gases, ammonia, nitric acid, super phosphate, artificial manures, pigments and paints, sulphuric acid and potassium dichromate, Active nitrogen and fixation of nitrogen.

Unit 4. Double and complex salts, and their stability.

Unit 5. Development of sulphuric acid industry.

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### III Year B.Sc., B.Ed. (Pass)

#### PAPER VII

#### (Organic Chemistry)

Max. Marks 33

Internal 6

External 27

*Duration—3 hrs.*

Unit 1. Aromatic hydrocarbons—A comparative study of benzene and naphthalene orientation in benzene derivatives, Aromatic substitution—Nucleophilic and electrophilic, Körner's absolute method of orientation.

- Unit 2. Halogen derivatives of Benzene and toluene amino and nitro derivatives of benzene.
- Unit 3. Benzene sulphuric acid Disulphonate, dihydric phenols.
- Unit 4. Phenols-Mono nitric, Dinitro, Trinitro, Anisol.
- Unit 5. Triphenylmethane and diphenyl methane, simple azo dyes and their structure.
- Unit 6. Pyridine and its simple derivatives.
- Unit 7. Carbohydrates-general classification and characteristics of each class structure of glucose, fructose, Maltose, sucrose, starch and cellulose prop. and manufacture.
- Unit 8. Amino acids, glycine-its preparation, properties and uses.
- Unit 9. Phenolic aldehydes and acids : Salicylaldehyde, salicylic acid, Reimer Tiemann reaction.
- Unit 10. Aromatic acids and their derivatives : Benzoic acid, benzoic anhydride, Benzamide, Benzoic ester phenyl acetic acid, cinnamic acid, acetylsalicylic acid.
- Unit 11. Inductive effect, electro meric displacement. Steric effect, walden inversion in relation to the reactivity of organic compounds.
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IV-Year.. B.Sc. B.Ed. (Honours)

PAPER IX

(Inorganic)

Max. Marks 67

Internal 14

External 53

*Duration—3 hrs.*

Unit 1. Compounds of Inert gases.

Unit 2. Lanthanide elements ( simple elementary treatment)

Unit 3. Peroxides of carbon and sulphur.

Unit 4. Types of elements and their characteristics.

Unit 5. Elements of instrumental analysis-calorimetry and polarimetry pH meters.

Unit 6. Werner's complex and co-ordination No. their structure and geometry in general.

Unit 7. Francium and Astatine. Technetium and Promethium (only discovery).

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PAPER X

(Organic Chemistry)

Max. Marks 66

Internal 13

External 53

Duration —3 hrs.

Unit 1 Use of E.D.T.A., Dimethyl glyoxime, oxine (8-hydroxyquinoline, theory and practice.

Absorption, indicator, Radioactive indicators, elements of gas and liquid chromatography.

- Unit 2 Elementary treatment of valence bond theory and molecular orbital bond theory with special reference to various types of bonds formed in organic compounds and other phenomena as dipole moment.
- Unit 3 Proteins and polypeptides—Methods of synthesis and their properties. Treatment of proteins with special reference to Prof. Sanger's work.
- Unit 4 Chemistry of Heterocyclic compounds. Furan thiophene, and pyrole, indole, thiazole, quinoline and isoquinoline (excluding their constitution).
- Unit 5 A general study of adenine, guanine, uric acid, cytosine, caffeine uracil (excluding methods of preparations and constitution).
- Unit 6 Mercaptans.
- Unit 7 Insecticides— D.D.T. (Brief outline of its theory).
- Unit 8 Alicyclic compounds, Baeyer's strain theory, stability and conformation of rings inorganic compounds.
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*IV Year B.Sc., B.Ed. (Hons.)*

PAPER XI

(Physical Chemistry)

Max. Marks 67

Internal 13

External 54

Duration 3 hrs.

- Unit 1 Electrodes potential, oxidation and reduction potential, concentration cells with and without transport.
- Unit 2 Theory of strong electrolytes : Debye Huckel's theory and simple treatment of Onsagar equation (simple treatment).

Unit 3 Elements of Photo-chemistry, laws of photo chemical equivalents.

Study of the reactions  $H_2 + Br_2$  and  $H_2 + Cl_2$   
Decomposition of HI.

Unit 4 Adsorption and colloidal state, types of adsorption Langmuir's isotherms, Brownian Movement and Avogadro's No. origin of charge, stability of Lyophobic colloids, gels and emulsions. industrial application of colloids.

Unit 5 Phase rule—Bicomponent systems—KCl-water ferric chloride-water, Pb—Ag.

Unit 6 Chemical kinetics : Energy of activation and its determination. Arrhenius equation.

Unit 7 Atomic spectra—four quantum numbers.

Unit 8 Clausius and Clapeyron equation, derivation of law of mass action and phase rule equation, thermodynamically.

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### Practicals

Max. Marks 100

Internal 50

External 50

Duration—2 hrs.

### *Organic :*

1. Estimation of nitrogen or sulphur in an organic compound.
2. Estimation of hydroxyl group or amine group in organic compound.
3. Chromatographic separation of Amino acids.
4. Two stage preparation of organic compounds.

*Inorganic :*

1. Volumetric estimation of zinc, ferric (III): calcium and magnesium using E.D.T.A. or polarograph.
2. (a) Gravimetric analysis of mix. (i) silver and copper (ii) Nickel and siluer or (b) Gravimetric analysis of (i) Dolomite of Ca and Mg. (ii) Brass.
3. Titration of mixture of iodide and chloride.

*Physical :*

1. Determination of molecular weight by cryoscopic and elluloscopic method.
2. Measurement of conductivity of solutions, dissociation constant of acetic acid, A degree of dissociation of acid, basecity of an acid.
3. Determation of partition coefficient of  $I_2$  .
4. Heat of neutralization of acids and bases.

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*B.Sc. B.Ed. (Hons.) Course*

## Chemistry ("Ceramics")

## Theory :

Max. Marks 100

Internal 20

External 80

Duration—3 hrs.

## (Principles)

Unit 1 Ceramics of the past : Brief history of China porcelain; Contemporary European Ceramics; Modern ceramic industries Ceramic and pottery industries in India.

- Unit 2 Ceramics as a school subject : Aims and objectives : materials, tools and machinery sources of ceramic supplies and equipment; layout for a ceramic workshop in school.
- Unit 3 The Chemistry of ceramic materials : The clay and pottery bodies; (recipes for pottery bodies;) tests for clay.
- Unit 4 Ceramic calculations : To find a molecular weight of a compound; firing changes in a clay body; firing change in a glaze; the  $RO$ ,  $R_2O_3$ ,  $RO_2$  system; The batch recipe.
- Unit 5 Ceramic glazes and their compositions : Lead glazes; alkaline glazes. porcelain and stoneware glazes; Frit glaze; crackle glazes; Mat glazes; Reduction glazes, Crystalline glazes; Bristol glazes; Luster glazes; salt glazes; slip glazes.
- Unit 6 Colouring pigments and principles of firing.

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### PRACTICAL

Max Marks 100

Internal 50

External 50

Duration 4 hrs.

- Unit 1 Preparing an outline of the object; preparing clay; forming by slab, mould and wheel method; making free hand ceramic sculpture; modelling a figure; flat-coil construction; tube constructions; finishing article before firing.
- Unit 2 Pattern design and decoration : Scale; lance; repetition; variety and contrast; tension; decoration with clays and slips : Modelled decoration; impressed



decoration, incised decoration; slip decoration, Inlay work; slip trailing; slip painting, Grraffits.

Unit 3 Preparing glazes ! glazing in the raw-clay state; glazing in the biscuite state; How to glaze : Dip glazing, poured glazes; brushed glazes; sprayed glazes, glaze defects and their remedies.

Unit 4 Colouring objects with pigments : Preparing black, blue, brown, green, red, tan and yellow with various colouring oxides; using opacifiers; spined stains; under-glaze colours, overglaze colours; preparation of custers; keeping proper temperature.

Unit 5 Kiln stacking and firing; Indigeneous method of firing an electric kiln; check-up an electric kiln before firing; firing cycle; Preliminary heating; ceramic pyrometric cones, packing a kiln; packing a 'Biccuit' kiln; packing a soft-glaze kiln; packing an over glaze kiln; packing a stone-ware kiln.

Unit 6 Preparing a series of graded articles : Articles used for decoration purposes; articles used in home and industry.

*Note :* Each student will have to produce atleast 12 quality models in a session in the laboratory indicating their production cost and method of working etc.

#### *Suggested Books*

Dora M, Billing to N. The Technique of Pottery.

Harald Isonstein : Creative Clay Work

Geza and Mandi : The Craft of Ceramics.

tools, Reamers, Taps and Dies, Milling cutters, Grinding wheels wheel materials.

Machine tools .....Lathes and Boring mills, shapers and Planners, Broaches, Saws, Drills, mills, grinders.....Their types, working and specifications ... Holding Devices. (chucks, collects, clamps etc ) Jigs & Fixtures, (simple treat-

ment in brief), Application of Jigs & Fixtures in mass production, Machine Attachments. Machining operations.....  
Brief study.

Transmission of Power.....Various power drives. Modern methods. Belt, rope and chain drive, gear drive, gear trains and methods of transmission of power through gearing, Advantages and Disadvantages of each system.

### *New Techniques of Production :*

Work Handling in Automatic Machining. Circular indexing, Automatic Tapping and Drilling Machines, Automation. Clad steels process. High Energy Forming. Chemical Milling. Plasma Arc, Numerical Control methods of machining.

### *Inspection & Gauging :*

Inspection Procedures. Organisation of Inspection, quantity of Inspection Process Control charts, quality control Principles of measurement, (dimensional references, tolerance), Inspection equipments...Direct and Indirect reading instruments. Micrometer calipers, verniers, sine bar, indicating gauges, and comparator, Dial Indicator, Electric Gauges, Pneumatic Gauges, Optical comparators, optical flats, fixed gauges, Non-destructive testing.

### *Books for Text :*

1. Manufacturing Processes—  
by M.L. Begman.
  2. Manufacturing Processes—  
by S.E. Rusinoff.
  3. Materials and Processes—  
by J.E. Young.
  4. Manufacturing Materials and Processes —  
by H.D. Moore & D.R. Kibbey.
-

**PRACTICALS :**

Max. Marks 100

Internal 50

External 50

Duration—3 hrs.

Practice in the subject should involve laboratory exercises so as to cover up the syllabus. This should include :

1. Study of Ferrous and non-ferrous materials-workshop tests.
2. Destructive and non destructive test in material testing lab. with simple specimen.
3. Study of Layout and Preparation of Factory layout simple exercises involving all fundamental rules.
4. Study of a model or chart of Hot Rolling Process.
5. Simple Forging Projects involving Heat treatment.
6. Hardening and Tempering of cutting tools such as Lathe tools, Twist Drill, Wood work tools.
7. Project work on sheet metal such as conical objects with development practice.
8. Fabricating sheet metal projects using various mechanical joints and soldering joints.
9. Project on O.B.E. press involving simple Die-operation such as Die for round washers.
10. Study of various forms of Plastics.
11. Simple Brazing work of casting and also for forge items. (Gas welding only).
12. Fabrication of Projects by Arc Welding so as to cover science apparatus.
13. Testing of Weldments (Workshop tests only).
14. Moulding Practice of small objects using split pattern, and core boxes.

15. Aluminium castings of small science kits parts.
  16. Cast Iron castings of small projects.
  17. Machining and small projects involving use of various machine tools.
  18. C. I. Casting and machining of spur gear wheel.
  19. Testing and Inspection of machine objects with Lay-out tools. (micrometer vernier, sine bar and gauge blocks).
  20. Testing and Inspection of projects with a Dial Test Indicator.
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## APPENDIX No. VII

(Ref. Res. No. 21 dated 8-2-1971 of the Faculty of Science.)

Minutes of the Meeting of the Board of Studies in Physics Held on 14.9.70 at 12 noon, at the University Office, Jaipur.

**Present :**

1. Dr. B.L. Saraf (Convener)
- 2 Dr. B.N. Roy
3. Shri S.K. Rath
4. Shri K.B.L. Sharma
5. Shri R.B. Mani
6. Dr. S.N. Dutta
7. Dr S. Loknathan

1. Under Section 34(4) (iv) of the University Act, the Board elected Prof. S.K. Rath as a member other than the Convener of the Board of Studies to serve on the Committee for the Selection of examiners in the subject for the year 1971.

2. The Board offered comments, after going through the reports of examination papers set for the examination of 1970.

See item No. 10 in these minutes.

3. The Board scrutinised the statements of qualifications and teaching experience etc. of teachers (received from University Teaching Departments; University College, affiliated institutions and other Universities) for inclusion and resolved that minimum of five years teaching after M. Sc. with at least three years teaching in theory subject be considered necessary as the minimum qualification of the appointment of examiners.

4. The Board recommended courses of Study and text books in Physics for the following examinations together with changes in Regulations and Ordinances, (vide Appendix A.),

1. Pre-University Examination, 1972.
2. B.Sc. pass First Year Exam. of 1972.
3. B.Sc. (Pass) Second Year Examination of 1973,
4. B.Sc. (Pass) Final Year Examination of 1974.
5. M.Sc. Prev. and/or Final Examination of 1972 and 1973 respectively.
6. B.Sc. (Hons.) Pt. I & II Examination of 1973-74.
7. B.Sc., B.Ed. Examination-

5. The Board considered the following suggestions of the Vice-Chancellor made by him in consultation with the Convener of the Examiners Reforms Committee :—

- A. Regarding award of Sessional marks, these may be awarded on the basis of Articulation. Comprehension and Objective Tests of the students, as per details given below :—

#### *Articulation—4 marks.*

Each student may be required to write atleast one essay on the subject each term. This may be assessed by 2 teachers independently and marks recorded. Marks may be declared publicly and if any student feels aggrieved he may be explained why that particular award was given.

#### *Comprehension—3 marks*

A test may be conducted each term to examine whether the students have picked up the appropriate expression. and have understood the subject matter.

#### *Objective Test—3 marks*

Under this category making may be done but the marks may not be shown to the candidates. But the solution may be written by the teacher and posted on the notice board so that the students may know the correct answers. If this rational

basis is adopted there is a change of increasing the quantum of internal assesment.

B. As regards syllabus at the Post-graduate level, I suggest that—

- ( i ) a list of full and half courses may be prepared according to the availability of teaching competence.
- ( ii ) it may be possible for a student to offer two full courses as topic to give specialisation in that topic. Such a student would Prepare him-self for research in this topic.
- (iii) a student who wishes to learn the subject for becoming a teacher, he may offer 4 half courses covering a variety of topics to have an extensive view of the subject. In fact the students may have to choose one full and two half courses.

C. For very few bright students it may be suggested that they may be encouraged to do some self study on pre-assigned topics which are not included in this curriculum and they may be assessed entirely on that as far as sessional marks are concerned.

*Resolved to recommend that :*

- (a) The board welcomed the suggestion of the Vice-Chancellor and proposed that they be circulated and if possible implemented.
- (b) The Board is of the opinion that the course content of M.Sc.(Phy.) are bare minimum & no curtailment and accommodation of specialised topic is possible. However, the board is of opinion that specialised examination courses upto M. Sc. could be provided by the University and a certificate may then be granted to the successful candidate.
- (c) Board welcomed the suggestion for alternative courses and examinations but it is of opinion that institution should be given freedom to

develop courses and pattern of examination for a limited period; say three years.

As a practical suggestion the board thinks that the laboratory experiments could be left entirely free with the institutions and there should be no common paper setting.

6. It was reported that the Academic Council, vide its Res.No.35 dated 21-4-70 accepted the following draft resolution proposed by Dr. Dayakrishna, Chairman, Examination Reforms committee vide his letter No. Acd/1082 dated 27-4-70 as a result of discussion in the meeting of the Examination Reforms Committee held on 17 April, 1970 :—

“Resolved that in the interest of raising standards of teaching and examinations and award of degrees the board of Studies may prepare alternative Schemes of courses and Examinations in their respective subjects to be implemented as early as possible.”

The Board approved of it but action was delayed.

7. With reference to the Faculty of science Res. No. 7 (iv) dated the 31st Jan., 70 The Board considered the proposal of Shri S. K. Rathi, Prof. and Head of the Deptt. of physics, Dungar College, Bikaner as contained in his letter dated 29-11-69 to the effect that ambiguity in the list of experiments in Physics prescribed for I Year, T.D.C. be removed. Resolved that the list of experiments for 2nd year, 3rd year, will be recasted according to instruments and their use rather than specific measurments. This will make a uniform pattern for all the three years for the degree course.

8. The board reconsidered the following recommendations No. 10 (c) dated the 7th Nov., 1969 of the Board of Studies in Physics with ref. to the Faculty of Science Res. No. 14 dated 13.1.70.

“that in M.Sc. examination it should not be necessary for the candidate to get a minimum of 25% marks in each paper and so resolved that this condition for passing the M. Sc. examination be deleted.”



Resolved that the Faculty kindly reconsider it and pass it since this is of academic interest and is a very serious difficulty for the candidates.

9. The following recommendation No. 10 (ii) dated 20-9-69 of the B.O.S. in Chemistry as desired by the Faculty of Science vide its Res. No. 11 dated 31.1.70 was considered by the board.

“The Board considered the proposal to change the ratio of marks of theory to practical from 4:2 to 3:2 in M.Sc. Final Examination as is the practice in almost all the Universities in the Country. Resolved to recommend that the proposal be accepted and maximum marks for theory papers be 75, the total being 300 marks for four theory papers. The practical marks be 200 as at present.”

Resolved that for Physics the present ratio of 4:2 for theory and Practical be retained. However the recommendations of the Board of Studies in chemistry may be respected for Chemistry. The Board considered the distribution of marks in I, II & III year. B. Sc. Examination and is of opinion that the ratio of marks should be 1.2.3.

10. The Board considered the items No. 8, 11 to 14 of its agenda regarding the various complaints against the question papers and the replies received from the examiners. The board is of the opinion that no further action is necessary.

11. The Board considered the list of publications as printed in the catalogues received from the Senior Research Officer, Commission for Scientific and Technical Terminology (Ministry of Education) New Delhi, vide his letter dated 30.7.70 for inclusion in the University Syllabi.

Resolved that the board never recommended any books and it wishes to continue the present practice.

12. The Board considered the list of publications as printed in catalogues received from the National Book Trust, India vide his letter No. F-37-2/69/SC dated the 7th Nov., 69 for inclusion of their books in the Syllabi of different examinations.

Resolved that the board never recommended any books and the board wants continue the present practice.

13. The revised Scheme of B-Sc , B. Ed. examinations together with the draft Ordinances Regulations and the Syllabi for the same as proposed by the Principal, Regional College of Education. Ajmer vide his letter No. F.9-196/70/8576 dated the 29th July, 70 was considered ( vide appendix B. )

Resolved to recommended that the board has no objection to accept the new scheme proposed by the Principal. Rtgional College of Education, Ajmer.

14. The Board considered the problem of appointing internal examiners for M.Sc. (Prev.) and (Final) examinations and resolved that separate internal examiners be appointed for the two examinations and independent full remuneration be paid. There are various reasons for justifying this recommendations.

15. In 1st T.D.C. (Biology Group)—Elementary Mathematics paper may be made compulsory.

16. Since B.Sc. honours Physics course is not co-related with pass course candidates who undergo the 1st year honours course and pass the examination they should be allowed the II year honours course. The condition of 50% minimum marks be deleted.

17. The Board examined the course contents of B.Sc., B. Tech., B.Ed. students and is of opinion that they may be considered qualified for taking admission in M. Sc. (Physics).

18. Since the Board is informed that B.Sc. honours B.Ed. degree is already instituted in the University Hand Book Part II hence the courses proposed by the Principal Regional College of Education, Ajmer be accepted as such.

19. The Ex-students in M.Sc. who have already passed in Practicals be given the option of retaining their Practical marks and need not be required to appear again in practicals.

*M. Sc. Final*

Paper—Quantum Mechanics :—

*Note :—*Ten questions to be set in the examination paper, Candidates are required to answer five questions only.

### Postulates of Quantum Mechanics :—

Co-ordinate and momentum representation. Superposition of Eigen-states continuous spectrum. Simultaneous measurements and commuting operators. Heisenberg's uncertainty relations derived from operators, Equation of motion. Commutator Algebra. Schwartz inequality.

### Identical Particles and spin :—

- (a) Identical Particles :—Physical meaning of identity. Symmetric and anti-symmetric wave functions. Construction from unsymmetrised functions. Distinguishability of identical particles Connection with Statistical Mechanics Helium atom exchange degeneracy. Heitler London theory of hydrogen molecule.
- (b) Spin angular momentum :—Derivation of spin matrices and eigenfunctions Collisions of identical particles. Particles Electron Spin wave function.
- (c) Scattering cross section. Relations between angles, energies etc. in the laboratory and centre of mass system of co-ordinates.

Scattering cross section and normalisation.

- (d) The Born approximation Partial waves and Phase Shifts. Validity of Born approximation in the study of scattering from a square well potential.

### Approximation methods :—

- (a) Stationary perturbation theory :—Non-degenerate case : First order perturbation. Second order perturbation. Perturbation of an oscillator. Degenerate case : Removal of degeneracy in first and second order. First order Stark effect in hydrogen. Weak field Zeeman effect.
- (b) The variation method. Expectation value of the energy. Applications to excited states. Ground state of helium. Electron interaction energy.
- (c) WKB Method and its applications.
- (d) Time dependent perturbation theory :—Expansion in unperturbed eigenfunctions. First order perturbations. Physical interpretation. Transition probability. Harmonic perturbations. Second order perturbation. Effect of first order transitions.

*Quantum Theory of Radiation :—*

Formulation in terms of transition probability. Matrix elements of the perturbation. Transition probability for absorption. Transition probability for emission. Einstein coefficients.

*Angular Momentum :—*

Definition of angular momentum operator as the generator of an infinitesimal rotation conservation of angular momentum from the rotational invariance of the Hamiltonian. Angular momentum operator for a scalar and a vector field the idea of spin. Commutation relation. The eigenvalue problem of the angular momentum operator and explicit matrices for  $J^2$ ,  $J_x$ ,  $J_y$  &  $J_z$ . Coupling of two angular momenta. Clebsch-Gordan coefficient, their orthogonality and recursion relations. Evaluation of C-coefficient for the coupling of  $J_1 = \frac{1}{2}$ ,  $J_2 = \frac{1}{2}$  and  $J_1 = \frac{1}{2}$   $J_2 = 1$ . Wigner-Eckart theorem and its applications to obtain the static electro magnetic moments and selection rules for electromagnetic transitions.

*Relativistic wave equations :—*

Free particle K. G. equation and its solution. Dirac relativistic equation for free particle properties of Dirac matrices and relativistic invariance of Dirac Equation<sup>3</sup> Free particle solution, Negative energy states and positron. Dirac equation, in the presence of electromagnetic field and c-c invariance.

Dirac's equation for a central field. Spin angular momentum magnetic moment of the electron the concept of helicity. Spin orbit coupling. separation of the equation clarification of electron energy states in hydrogen atom.

## APPENDIX 'A'

*First Year Examination, 1972*

## PAPER I

Properties of Matter and Elementary Mechanics, Heat,  
Light and Sound.

## Section 'A'

*Properties of Matter and Elementary Mechanics :*

M.K.S. System of units, Dimensions and Dimensional Analysis.

Frame of reference, Inertial frame, centripetal and centrifugal forces, Principle of artificial satellites, Escape velocity.

Laws of conservation of momentum and energy, Elastic Collision in two dimension, Rotation of a rigid body : Torque Angular acceleration, Angular momentum. Moment of Inertia and Kinetic energy of rotation.

Simple Harmonic Motion : Characteristics, its differential equation, solution of the form  $y = a \sin \omega t$ , S.H.M. as a projection of uniform circular motion and phase of motion.

Surface Tension : Definition, cohesive and adhesive forces; Angle of contact and its determination. Excess of pressure inside a spherical liquid surface, capillary rise.

Viscosity : Definition, streamline and turbulent motion critical velocity Definition of coefficient of viscosity, stoke law and Terminal velocity.

Rotary oil pump, Diffusion pump and McLeod Gauge.

## Section 'B'

Heat : Kinetic theory of Gases : Postulates, Derivation of pressure and interpretation of temperature.

Two specific heats of a gas, Relation between  $C_p$  and  $C_v$ , Determination of  $C_p$  and  $C_v$ .

Thermal conductivity, Determination of conductivity by Searle's method.

Radiation : Kirchhoff's law, Black body, Prevost's theory of exchanges, Stefan's law. Newton's law; its verification

and determination of specific heat of a liquid by the method of cooling.

### Section 'A'

#### *Light :*

Dispersion of light by a prism, Dispersive power, Deviation without dispersion, Dispersion without deviation, Direct vision spectroscope.

Defects of images (Descriptive ideas) Removal of chromatic and spherical aberration for two thin lenses, Description of Ramsden and Huygen's eye pieces and their merits and demerits.

Spectrometer-its adjustments and use for spectro-analysis, types of spectra with their examples, Fraunhofer lines and their explanation.

Wave nature of light : Idea of interference (Young's two slit experiment), diffraction (shadow of a small circular obstacle, presence of brightness at centre), polarisation (Transmission of light through two tourmaline plates with different orientations). Transverse nature of waves and difference between polarised and unpolarised light.

Velocity of Light : Fezeau, Focault and Michelson's methods.

#### *Sound :*

Sound as a simple harmonic motion, Superposition of two sound waves.

Interference, Beats, Stationary waves and Lissajons figures. (Mathematical or Graphical description.)

Determination of frequency : Rotating drum, falling plate and Stroboscopic methods.

Doppler effect : Apparent pitch with source, listener and and medium in relative motion.

Characteristics of Sound (Loudness, pitch and quality), Musical scale, Diatomic and tempered scales.

### PAPER II

Magnetism and Stetic Electricity, Current Electricity and Atomic Physics.

### Section 'A'

(Three questions to be set out of which two to be attempted).

#### *Magnetism.*

Magnetic potential and intensity due to a small magnet at any point, Earth as small magnet, relation between angle of dip and latitude. Work done in rotating a magnet in a uniform magnetic field. Vibration of a magnet in a uniform magnetic field. Vibration magnetometer and its uses. Absolute determinations of M. and H. Verification of Inverse Square Law by magnetometers.

#### *State Electricity :*

Electrical capacity. Dielectric constant. Capacity of a spherical conductor, Energy of a charged conductor, loss of energy on a sharing of charge between conductors. Principle of a condenser. Capacity of parallel plate and spherical condensers. Condensers in series and parallel.

### Section 'B'

#### *Current Electricity :*

(Three questions to be set out of which two to be attempted).

Field at a point on the axis of circular coil, Magnetic shell, Equivalence of a magnetic shell and a closed electric circuit.

Moving coil galvanometer, its sensitivity, conversion of a galvanometer into an ammeter and voltmeter.

Simple potentiometer, Potential gradient. Measurement of voltage, Internal resistance of cell, calibration of a voltmeter, calibration of an ammeter, low current measurement. Comparison of low resistances.

Thermo-Electricity : Seebeck effect. Thermocouples. Thermopile.

Electromagnetic induction : Faraday's Laws. Lenz's Law. self and mutual induction. Induction Coil.

Elementary ideas of alternating current, Hot-wire ammeter and voltmeter. Transformer (Step-up and step-down.) Simple A.C. and D.C Generator. Electrical motor.

### Section 'C'

#### *Atomic Physics :*

(Five questions to be set out of which three to be attempted.)

Elementary ideas about atomic structure; electron, nucleus. Neutron-proton composition of the nucleus. Mass number and charge number. Isotopes.

Closed shell and valence electrons. Determination of charge of an electron by Millikan's Methods. Determination of  $e/m$  of electrons by Thomson's method. Hydrogen spectra. Identification of elements.

X-ray production by hot cathode tube. Properties of X-ray. Factors on which the intensity power of X-rays depend.

Photo electric effect. Quantum nature of radiation and Einstein's equation.

Thermionic emission. Diode and Triode valves. Their Characteristics. Diodes as rectifier. Triode as an amplifier.



## APPENDIX—B

REGIONAL COLLEGE OF EDUCATION,  
AJMERSYLLABUS FOR B.Sc. *in respect of Regional College  
proposed.*

Ist Yr. Science      Physics syllabus-same as Ist Yr. T.D.C. as  
                                 contained in the 1970 Edition of the  
                                 Syllabli.

II-Yr. Science      -do-      -do-      II Yr. T.D.C. -do-

IIIrd Yr. Science      -do-      -do-      III Yr. T.D.C. -do-

Practicals—also the same as prescribed in T.D.C. Exami-  
                                 nations.

B.Sc. (Hons.) B.Ed.—Enclosed herewith.

(IV Yr. B.Sc.)

IV Yr. B.Sc. (HONS.) B.ED.

Paper I-Physics

Introductory quantum Mechanics and Electro-dynamics.

1. Space-Time :

Geometry of space time, space-time intervals, past, present and future, more about four vectors, four-vectors algebra.

2. General solution of Maxwell's equation. The fields of an oscillating dipole. The potentials of a moving charge, the general solution of Lienard and wiechert the potentials for a charge moving with constant velocity; the Lorentz formula.

3. Electrodynamics in Relativistic rotation.

The four-dimensional gradient, electro-dynamic in four dimensional rotation. The four-potential of a moving charge, the invariance of the equations of electrodynamics.

4. Field energy and field momentum :

Local conservation, energy conservation and electromagnetism, energy density and energy flow in the electromagnetic field, the ambiguity of the field energy, Examples of energy flow, field momentum.

5. Electromagnetic mass :

The field energy of a point charge, the field momentum of a moving charge, electromagnetic mass, the force of an electron on itself, attempts to modify Maxwell's theory, the nuclear Force field.

6. The motion of charges in electric and magnetic fields. Motion in a uniform electric and magnetic fields, momentum analysis. An electrostatic lens, A magnetic lens, The electron microscope, Accelerator guide fields. Alternating gradient focussing, Motion in crossed electric and magnetic fields.

## QUANTUM MECHANICS

## 1. Quantum Behaviour :

Atomic mechanics, An experiment with bullets. An experiment with waves. An experiment with electrons, the interference of electron waves, watching the electrons, first principles of quantum mechanics, the uncertainty principle.

## 2. The Relation of Wave and particle view points :

Probability wave amplitudes, measurement of position and momentum, crystal diffraction, the size of an atom energy levels, philosophical implications.

## 3. Probability amplitudes :

The laws of combining amplitudes, the two slit interference pattern, scattering from a crystal, Identical particles.

## 4. Paulis exclusion principle, Stern-Gerlach experiment, general principles of quantum mechanics.

## 5. The dependence of amplitudes on time :

Atoms at rest : stationary states, uniform motion. Potential energy; energy conservation, forces; the classical limit, the 'precession' of a one-half particle.

## 6. Applications of quantum mechanics (Informative)

The Ammonia maser, The hydrogen molecular ion, Nuclear forces, the hydrogen molecule, the benzene molecule, Dyes.

## 7. Hyperfine splitting of hydrogen, the energy levels, the Zeeman splitting, the states of hydrogen, atom in a magnetic field.

## 8. The dependence of Amplitudes on position :

Amplitudes on a line, the wave function, states of definite momentum, Normalization, the schrodinger equation, quantized energy levels, Electron density distribution.

## PAPER II

Elements of statistical and solid state physics.

### 1. Basic Probability concepts :

Statistical Ensembles, Elementary relations among probabilities, The Binomial distribution, Mean values. Calculation of Mean values for a spin system, calculation of probability distribution, The random walk,

### 2. Statistical Description of particles :

(i) Single spin (ii) Ideal system of  $N$  spins (iii) Particles in a one dimensional box (iv) Particles in a three-dimensional box (v) Ideal gas of  $N$  particles in a box  
Statistical postulates, Probability calculations.

### 3. Statistical thermodynamics. Quantum statistics, Bose-Einstein, fermi-Dirac and classical statistics, distributions law according to three statistics, statistics of photons.

### 4. Particles of Modern Physics and their life time.

### 5. Symmetry operations, symmetry in space and time, symmetries in two dimensions, symmetries in three dimension, Parity.

### 6. Solid State Physics :

I. Classification of solids, interatomic forces and crystal structures. Growth of crystals, dislocations and crystal growth, imperfections and impurities in crystals.

II. Ionic, covalent, metallic and Vander Waals bonds.

III. Crystal lattices, Lattice vibrations, elastic constants, Dielectric properties of solids, solid dielectrics, ferroelectrics, dipole moments.

IV. Semiconductors, Hall effect, semi-conductor junctions, electrons and holes in semi-conductors.

V. Lattice vacancies, colour centres, Luminiscence.

IV. The magnetism of matter, Diamagnetism, Paramagnetism and Ferro-magnetism, Magnetic domains. Magnetic materials, Paramagnetism and Magnetic resonance.

—————

#### IV Yr. B.Sc. (HONS.) B.Ed.

##### List of Experiments—Physics

Time : 6 hours	Max. Marks 100
	Internal 50
	External 50

- \* 1. Determination of Planck's constant using a photocell.
- G 2. Determination of Mass of an electron
- G 3.  $e/m$  by helical method
- \* 4. Geiger-counter characteristics.
- \* 5. Determination of wavelength resolving power and refractive index by Michelson's Interferometer.
- \* 6. Calibration of a constant-deviation prism spectrometer use Hartman's formula for determining wave-lengths.
- G 7. Low resistance by Kelvin's Double Bridge.
- G 8. Self Inductance by Anderson's bridge.
- G 9. Characteristics of a transistor.
- G 10. Deflection sensitivity of a C.R.O.
- \* 11. Study of series and parallel resonance circuits.
- \* 12. Hartley Oscillator.
- G 13. Hysteresis curve.
- \* 14. Lecher wire.
- \* 15. Dielectric constant.
- \* 16. Oscillatory discharge of condenser.

G 17. Dynamic characteristics of a Triode-Load line.

- \* 18. 'e' by Millikans method.
- \* 19. Verification of Richardson's laws.
- \* 20. Hall effect.
- \* 21. Magnetic susceptibility.

*Note* : The students are required to perform 12 experiments in all (8 compulsory+any four from the optional group of experiments.)

(G) Group A (General)

(\*) Group B (Optional)

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## APPENDIX VIII

*(Ref. Reso. No 21 dated 8-2-71 of Faculty of Science)*

MINUTES OF THE MEETING OF THE BOARD  
OF STUDIES IN MATHEMATICS HELD ON  
TUESDAY THE 22nd SEPTEMBER, AND  
WEDNESDAY THE 23rd SEPTEMBER,  
1970 AT THE UNIVERSITY DEPART-  
MENT OF MATHEMATICS, JAIPUR.

The meeting was held on Tuesday the 22nd September, 1970 at 12.00 noon continued upto 6.00 p.m.; it again met on Wednesday the 23rd September, 1970 at 8.00 A.M. and continued upto 12.00 noon.

**Present**

1. Shri S.S. Lal Mathur
2. Shri R.C. Gaur
3. Shri S. N. Dube
4. Shri V.C. Nair
5. Dr. K.C. Sharma
6. Dr. G.C. Patni (Convener)

Dr. N.D. Gautam, Dr. M.C. Gupta attended the meeting on the first day by special invitation.

Dr. N.D. Gautam, Dr. M.C. Gupta, Dr. P.D. Verma and Shri Girraj Prasad attended the meeting on the second day by special invitation.

Shri V.C. Nair attended the meeting only on the first day.

1. Under Section 34 (4) (iv) of the University Act, Shri S.N. Dube was elected a member (other than the Convener of the Board of Studies) to serve on the Committee for the selection of examiners in the subject for the year 1971.

2. Regarding reports of examiners and question papers set for the various examinations of 1970, the Board observed:-

(i) that the following examiner's reports were missing :—

- (a) M.Sc. Final Paper I,
- (b) M.Sc. Final Paper on Elec. and Magnetism,
- (c) M.Sc. Final paper on General Topology,
- (d) M.Sc. Hons. Pt. II Paper II.

(ii) that a number of misprints/irregularities were present in a number of papers, for example :—

(a) *P.U.C. Paper I*

Question No. 1 (a) (i) ; The languages ambiguous since it is not clear whether x is real or imaginary.

(b) *2nd Yr. Paper I*

Question No. 9 (d) : not complete Here V should be a subset of F.

(c) *1st Yr. T.D.C. Paper I*

Q. No. 4 (a) Both English as well as Hindi version :  $(at_1^2, vt_1)$  printed wrongly in place of  $at_1^2 2at_1$ ).

*Note :* Since original manuscript of the question paper was not available, it could not be ascertained whether it was a printing error or an error by the paper setter.

Q. No. 7 (a) on maxima and minima. This question is out of course.

Q. No. 8 (i)  $\frac{\sin^4 x}{\sqrt{1-x^2}}$

misprinted in place of  $\frac{\sin^{-1} x}{\sqrt{1-x^2}}$

*Note :* Here also it could not be ascertained due to nonavailability of the original manuscript, whether it was a printing mistake or a mistake on the part of the paper-setter.



The Board observed again that in order to avoid printing mistake etc. it is absolutely necessary that the proofs of the question papers should be got correct by the examiners concerned.

3. The Board scrutinized the statements of qualifications and teaching experience of the teachers for inclusion in the revised panel of examiners for 1971 and added names of eligible persons to the panel.

4. The Board recommended the courses of studies and text books for the following examinations :—

- (a) Pre-University Exam. 1972 (both for Science and Arts) —Appendix I
- (b) B.A./B.Sc. Pass First Yr. Exam. 1972—Appendix II
- (c) B.A./B.Sc. Pass Second Yr. Exam. 1973—  
Appendix III
- (d) B.A./B.Sc. Pass Final Yr. Exam. 1974—  
Appendix IV
- (e) B.Sc. Honours Pt. I and Pt. II Exam.  
1973 and 1974—Appendix V
- (f) B.A. Honours Pt. I and II Exam. 1973  
and 1974—Appendix VI
- (g) M.A./M.Sc. Previous Exam. 1972 —Appendix VII
- (h) M.A./M.Sc. Final Exam. 1973 —Appendix VIII
- (i) B.Sc., B.Ed. Examinations 1972-75 —Appendix IX

In order to have full justification to the students and also to the courses to be covered, the Board considered necessary to have three papers each at the 2nd Year and 3rd Year T.D.C. Examinations. Accordingly the Board has recommended three papers in Mathematics for 2nd Year T.D.C. examination and three paper for 3rd Year T.D.C. Examination.

It was further decided that due to proposed major changes in the syllabus for M.A./M.Sc. Prev. Exam. 1973 and Final Exam. 1974, the same be also prepared in advance and sent to the Faculty of approval so that if approved the teachers concerned may have sufficient time to acquaint themselves.

5. The Board was to consider the suggestions received from the teachers of the various institutions in regard to the courses of studies for the various examinations. Suggestions from one person only were received and duly considered by Board.

6. The Board considered the following suggestions of the Vice-Chancellor made by him in consultation with the Convener of the Examinations Reforms Committee :—

- A. Regarding award as Sessional marks, these may be awarded on the basis of Articulation, Comprehension and Objective Tests of the students as per details given below :—

*Articulation : 4 marks*

Each student may be required to write atleast one essay on the subject each term. This may be assessed by 2 independent teachers independently and marks recorded. Marks may be declared publicly and if any student feels aggrieved he may be explained why that particular award given.

*Comprehension—3 marks*

A test may be conducted each term to examine whether the students have picked up the appropriate expression, and have understood the subject matter.

*Objective Test—3 marks*

Under this category marking may be done but the marks may not be shown to the candidate. But the solution may be written by the teacher and posted on the notice board so that the students may know the correct answers. If this rational basis is adopted there is a change of increasing the quantum of internal assessment.

- B. As regards syllabus at the Post-graduate level, I suggest that—

(i) a list of full and half courses may be prepared

according to the availability of teaching competence.

- (ii) it may be possible for a student to offer two full courses as a topic to give specialisation in that topic. Such a student would prepare himself for research in this topic.
- (iii) a student who wishes to learn the subject for becoming a teacher, he may offer 4 half courses covering a variety of topics to have an extensive view of the subject. In fact the students may have to choose one full and two half courses.

- C. For very few bright students it may be suggested that they may be encouraged to do some self-study on pre-assigned topics which are not included in their curriculum and they may be assessed entirely on that as far as sessional marks are concerned.

*Resolved that :*

(a) *Articulation* : The Board was not in favour of getting the essay examined by two teachers as it is not feasible always and will create great difficulty.

The Board was also not in favour of objective test of 3 marks taking separately.

Regarding award of sessional marks, the Board recommended that the same may be awarded on the basis of articulation, comprehension and objective test of the students as per details given below :—

*Articulation :*

Each student may be required to write at least one essay on the subject each term, it may be assessed by the teacher concerned or by the teachers nominated by the Head of the Department. The marks may be declared publicly and if necessary, may be explained why that particular award was given.

*Comprehension and objective test : 6 marks*

A written test may be conducted each term to examine whether the students have picked up the appropriate expression and have understood the subject matter.

(b) Regarding the syllabus at the Post-graduate level, the Board is of the opinion that the scheme needs full consideration and therefore recommends that the Academic Council or the Faculty should get it examined thoroughly through some sub-committee.

(c) Regarding self study on pre-assigned topics by very few bright students, the Board agreed with the suggestion

7. It was reported to the Board that the Academic Council, vide its Res. No. 35 dated 21-4-70 accepted the following draft resolution proposed by Dr. Dayakrishna, Chairman, Examination Reforms Committee vide his letter No. Acd/c/1082 dated 17-4-70 as a result of discussions in the meeting of the Examination Reform Committee held on 17th April, 1970 :—

“Resolved that in the interest of raising standard of teaching and examinations and award of degrees the Board of Studies may prepare alternative Schemes of courses and Examinations in their respective subjects to be implemented as early as possible.”

The Board agreed with the suggestion in principle but postponed the matter for future Consideration

8. The Board considered the report of the meeting of the teachers of Mathematics represented at the Faculty of Science held on 1st February, 1970 (as per resolution No. 16 dated 31st January, 1970 of the Faculty of Science). The Board included the various valuable suggestions but was of the opinion that it was desirable to have three paper each at the second Year and third year T.D.C. Examinations.

9. With reference to the Faculty of Science Res. No. 11 dated 31-1-70, the Board considered the following recommendation No. 10 (ii) dated 20-9-69 of the Board of studies in Chemistry.

Regarding the proposal of the Board of studies in chemistry to change the ratio of marks of Theory and practicals from 4:2 to 3:2 in M.Sc. Final examination. The Board did not offer any comments.

10. With reference to the Faculty of Science Res. No. 14 dated 31-1-70 the Board considered recommendation No. 10 (c) dated the 7th November, 1969 of the Board of

studies in Physics to the effect that the condition of obtaining minimum of 25% marks in each paper be deleted and resolved that the board is not in favour of deleting the same.

11. Regarding the complaint received against Mathematics Question paper I of First Yr. TDC. Science Examination, the Board considered the same along with the remarks of the paper setter. The Board came to the conclusion as given in para 2.

12. Regarding complaint received against Mathematics Question Paper II of Third Yr. TDC. Science Examination 1970 (according to 1967 revised edition), the Board was of the opinion that the paper was in general conformity with the standard laid down/followed by the University.

13. The Board considered the list of publications as printed in the catalogue received from the Senior Research officer, Commission for Scientific and Technical Terminology (Ministry of Education) vide his letter dated 30-7-70 for inclusion in the University syllabus.

The Board included the books wherever they were found suitable.

14. The Board could not consider the list of publication as printed in the catalogue received from the National Book Trust of India vide its letter dated 7-11-69 as the list was not made available to the Board.

15. The Board considered the revised scheme of B.Sc. B.Ed. (Hons.) Examination together with the draft Ordinances/Regulations and the Syllabi for the same as proposed by the Principal, Regional College of Education, Ajmer vide his letter No F 9-196/70/8576 dated 29-7-70. The Board finalised the same as far as the subject of Mathematics was concerned as per Appendix x.

16. The Board recommended that the failures of Second Yr. T.D.C. Examination of 1970 in Mathematics who want to reappear as ex-students in 2nd Yr. T.D.C. Examination of 1971 be allowed to be examined in the old course of 1968 edition for one year more as there were major changes in the subject.

17. The Board recommended that since there were many important changes in the syllabus, a model question paper

for the Mathematics Paper First for Second Year T.D.C. Examination 1971 for the syllabus as given in 1969 edition be got set and circulated well in advance to all the institutions concerned for the information of the Mathematics Teachers and the students concerned.

The meeting came to an end with a vote of thanks to the Chair.

( Dr. G.C. Patni )

*Convener.*

## APPENDIX I

*P.U.C. Examination, 1971*

## MATHEMATICS

There shall be two papers each of three hours' duration and each carrying 50 marks in the Faculty of Arts and 75 marks in the Faculty of Science.

	FACULTY OF	
	Science	Arts
Paper I—Section A : Algebra	) 75 marks	50 marks
Section B : Trigonometry		
Paper II—Section A : Coordinate	) 75 marks	50 marks
Geometry		
Section B : Statistics	)	
or	)	
Mensuration	)	
of Solids	)	
<hr/>		
Total	150 marks	100 marks
Minimum Pass Marks	50 marks	33 marks

- Notes :* 1. There shall be two sections in paper I. The candidates will be required to attempt there questions from each section.
2. There shall be two sections in paper II. The candidates will be required to attempt six questions in all, at least 4 questions from Section A and at least 4 questions from Section B.
3. Common papers will be set for both the Faculties of Arts and Science. Maximum marks will however, be different.

*Paper I—Algebra and Trigonometry.*

Section (A) Algebra :

The conjugate, modulus and amplitude of complex numbers. Cube roots of unity.

Theory of quadratic equations. Arithmetical, Geometrical and Harmonical Progressions and simple problems on them.

Easy problems on permutations and combinations. The Binomial Theorem with any exponent; its proof for positive integral exponent. Simple problems on Binomial Theorem and exponential and logarithmic series. Use of Logarithms. Simple problems on resolution into partial fractions.

### Section (B) Trigonometry :

Definition of sexagesimal and circular units of angular measurements. Trigonometrical ratios and their relations to one another. Graphs of  $\sin x$ ,  $\cos x$  and  $\tan x$ . Trigonometrical ratios of sum and difference of angles. Product and sum formulae. Trigonometrical ratios of multiple and sub-multiple angles. General expressions of all angles having the same trigonometrical ratio. Solution of simple trigonometrical equations. Simple Identities. The relations between the sides and angles of a triangle. Properties of triangles and circles connected with them. Simple problems on heights and distances, Easy problems on inverse circular functions.

### Paper II—Coordinate Geometry and Statistics or Mensuration of Solids;

Section (A) Coordinate Geometry : (Rectangular coordinates only Distances between two points, Ratio Formula. Area of a triangle. Locus. Equations of straight lines in the following forms :—

$$(i) \quad y = mx + c,$$

$$(ii) \quad \frac{x}{a} + \frac{y}{b} = 1,$$

$$(iii) \quad x \cos \alpha + y \sin \alpha = p,$$

$$(iv) \quad y - y^1 = m(x - x^1)$$



$$(v) \quad y - y^1 = \frac{y^1 1 - y^1}{x^1 1 - x^1} (x - x^1)$$

$$(vi) \quad \frac{x - y^1}{\cos \theta} = \frac{y - y^1}{\sin \theta} = r$$

Angles between two straight lines, lengths of perpendiculars from given points on given straight lines. Intersection of lines. Bisectors of angles between straight lines. Homogeneous equation of second degree, angles between two straight lines, equations of the bisectors of the angle. General equation of the second degree representing two straight lines, Straight lines through origin and intersections of second degree curve and a straight line.

coaxial circles,

Circles excluding.

#### Section (B) Statistics :

Definition. statistical data, frequency distributions histograms; Measures of central tendency and dispersion (Arithmetic mean, geometric mean, harmonic mean, median, mode, range, mean deviation and standard deviation).

OR

#### Mensuration of Solids :

Simple applications of the formulas for volumes and surfaces of rectangular parallelopipeds, right pyramids, prisms, cylinders, cones, spheres, frustums of cones and segments and sectors of spheres.

#### Books recommended :—

1. A Text Book of Algebra by Gour and Gangwar, Ramesh Book Depot, Jaipur.
2. A Text Book of Higher Algebra by G.P. Gupta (Youngman and Co., Delhi).
3. Higher Algebra by Gupta and Mishra (College Book Depot, Jaipur.)

4. Plane Trigonometry by Patni and Gupta (College Book Depot, Jaipur).
5. समतल त्रिकोण मिति by Patni and Gupta (College Book Depot, Jaipur).
6. Plane Trigonometry by Gaur and Kashyap (Ramesh Book Depot, Jaipur).
7. Co-ordinate Geometry by Patni and Singhvi (Ramesh Book Depot, Jaipur).
1. Mensuration of Solids by Gupta and Mishra (College Book Depot, Jaipur).

## APPENDIX II

*First Year T.D.C. 1972 (Arts and Science)*

There shall be two papers each of 3 hours duration. In Faculty of Science each paper will carry 75 marks, while in the Faculty of Arts each paper will carry 50 marks. Each question paper shall be divided into two sections and the candidates will be required to attempt at least two questions from each section.

Paper I : Algebra and Coordinate Geometry.

Paper II : Calculus and Mechanics.

**Paper First***Section A : Algebra (Sets, Relation, Functions and Number System)*

Sets, subsets and their complements. Union and intersection of a finite number of sets and their properties such as associativity, commutativity, distributivity and Demorgan's law, Venn diagram.

The concept of relation. Equivalence and order relations. Mapping-functions. Injection, surjection and Bijection. Binary relation, Inverse relation and Inverse function.

Natural Numbers, Peano's Axioms, Mathematical induction. Integers defined in terms of natural numbers. Order relation in integers. Prime integers. Residue class modulo positive integers. Rational numbers in terms of integers, and then simple properties.

*Section B : Coordinate Geometry*

Circles including orthogonal circles and radical axes. Conic Section (Parabola, ellipse and Hyperbola) their equations, diameters, tangents, normals, chord of contact and polars; asymptotes of a hyperbola and conjugate hyperbola. (To be treated in rectangular coordinates only)

**Paper Second***Section A : Calculus :*

Concepts of limits, functions and their derivatives  
Geometrical significance of  $\frac{dy}{dx}$ . Differentiation of simple

algebraic, circular and inverse circular, exponential and logarithmic functions. Derivative of composition of functions. Second order derivative and their application to Mechanics.

Integration as anti-derivative. Integration of simple algebraic, circular exponential and logarithmic functions. Integration by parts and simple cases of integration by substitution and breaking into partial fractions. Simple cases of definite integral and its geometrical interpretation.

### *Section B : Mechanics :*

Forces, velocity and acceleration. Their representation as directed line segments, their resolution and composition (Parallelogram Law and triangle law). Lami's theorem. Equilibrium of a body under three forces; parallel forces and moments.

Rectilinear motion under uniform acceleration. Vertical motion under gravity. Newton's Laws of motion. Rectilinear motion on an inclined plane.

### Books recommended :

1. Coordinate Geometry : Patni and Singhvi (Ramesh Book Depot, Jaipur.)
2. Coordinate Geometry : S. L. Loney (Macmillan).
3. A Text Book of  
Coordinate Geometry : Mehra, Jain, Bhatt and Bhargava
4. Elementary Calculus : Patni and Gaur (Ramesh Book Depot, Jaipur.
5. Statics : Mehra and Others (Ramesh Book Depot, Jaipur).
6. Elementary Mechanic : Pt. I : R.S. Verma.
7. Elements of Statics : S.L. Loney.
8. Elementary Dynamics : M.C. Gupta and Girraj Prasad (Ramesh Book Depot, Jaipur.
9. Elements of Dynamics : S. L. Loney.

## APPENDIX III

*Second Year T.D.C. Exam., 1973*

There shall be three papers, each of three hours duration. Each paper shall carry 50 marks in Faculty of Science and in Faculty of Arts, the three papers I, II and III shall carry 33, 34 and 33 marks respectively.

*Paper I : Algebra :*

Groups : Definition and simple properties. Sub-groups.

Cyclic subgroups. Cosets. Lagrange's theorem on the orders of subgroup. Permutation group. Homomorphism; Isomorphism, endomorphism and automorphism. Cayley's theorem. Normal sub-groups and quotient sub-groups.

Rings. Integral Domain, characteristics. Residual class rings. Ideals, prime ideals and Principal ideals.

Polynomial rings. Principal Euclidean domain and unique factorisation theorem.

Fields, subfields. Prime fields. Quotient field of an integral Domain.

*Matrices and Determinants :*

Algebra of Matrices, Determinants upto fourth order and their fundamental properties. Inverse of a matrix. Application to system of linear equations. Equivalent Matrices and Rank of a matrix.

*Paper II : Calculus*

Note :—The paper shall consist of two sections and candidates are required to attempt at least two questions from each section.

Section A : Same as B.Sc. Pass, Second Yr.

Exam. 1972.

(In 1970 edition)

Section B : —Do—

**Paper—II—Calculus**

**Section A :—***Differential Calculus* : Functions of the real variable. Examples of functions. Limit of a function Continuous Functions, Successive differentiation. Leibnitz's Theorem.

Rolle's Theorem, Mean value Theorems (Lagrange's and Cauchy's form), Taylor's and (Maclaurin's Theorems, Taylor series. Indeterminate forms, Use of L'Hospital's rule.

Partial Differentiation; Partial derivatives of a function of several variables and their geometrical interpretation. Euler's Theorem. Differentials; total differentials, approximation by differential. Derivative of an implicit function Directional derivative. Tangent planes Taylor's Theorem for function of two variables.

Some applications of Calculus—tangents and normals, asymptotes, curvature of plane curves singular points. Envelopes. Tracing of simple curves in rectangular and polar coordinates. Maxima and minima of functions of one or two variables.

**Section B :—***Integral Calculus* : Evaluation of Integrals, standard forms, methods of Integration—by substituent, by parts and by partial fraction Easy reduction,

Formulae. Definite integral with its properties Anti-derivative and the indefinite integral. Fundamental Theorem of integral calculus. Approximation of integrals (Simpson's rule and trapezoidal rule).

Applications of integration to areas in rectangular and polar coordinates, the length of a plane curve, volumes and surfaces of solids of revolution. Double and triple integrals (simple cases).

**Paper—III—Vectors, Statics and Hydrostatics.**

**Note :** There shall be two sections and candidates shall be required to attempt at least two questions from each section.

### Section A : *Vectors and Statics*

**Vectors** :—Definition : Graphical representation;

Algebra of vectors (addition; commutative, associative and distributive laws) Cross and Dot products of two or three vectors.

**Statics** :—General conditions of equilibrium of a body under a system of co-planar forces. Friction; centre of gravity; common catenary and virtual work.

### Section B : *Hydrostatics* :

Fluid pressure, Pressure on immersed surfaces; centre of pressure. Conditions of equilibrium of a floating body including metacentric formulas, Equilibrium of gaseous liquids (excluding capilarity and oscillation of floating bodies).

#### *Books Recommended :*

- |                                       |  |
|---------------------------------------|--|
| 1. Abstract Algebra                   | : Shantinakaran                                  |
| 2. A First Course in Abstract Algebra | : Kapur and Gupta                                |
| 3. Modern Algebra                     | : Sharma and Seth                                |
| 4. Higher Algebra                     | : Ray and Sharma                                 |
| 5. Higher Algebra                     | : Mehra and Others                               |
| 6. Differential Calculus              | : Gorakh Prasad                                  |
| 7. Differential Calculus              | : Shanti Narayan                                 |
| 8. Differential Calculus              | : Goutam and Mishra                              |
| 9. Integral Calculs                   | : Gorakh Prasad                                  |
| 10. Higher Integral Calculus          | : Prasad and Prasad                              |
| 11. अवकलन गणित                        | : Shanti Narayan<br>Translated by<br>J.L. Sharma |
| 12. समाकलन गणित                       | : —do—by Lajjaram                                |
| 13. Vector Analysis                   | : Weatherburn                                    |

14. Elementary Vector Analysis : Gupta and Others
15. Vactor Analysis : Thakur, Sinha and Others
16. Text Book of Statics : R.S. Verma
17. Statics : A.S. Sinha
18. Statics : S.C. Mitra
19. Statics : Bhatt and Jain
20. Hydrostatics : B.N. Prasad
21. A Text Book of Hydrostatics : Ray



## APPENDIX IV

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*Third Year T.D.C. Exam., 1974*

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There shall be three papers each of 3 hours duration. Each paper shall carry 50 marks in Faculty of Science and 33, 33 and 34 respectively in Faculty of Arts.

*Paper I : Analysis :*

Read and Complex number system. Finite, countable and uncountable sets. Metric spaces, compact sets, perfect sets and connected sets. Sequences and series. Continuity. Differentiability and the concept of Riemann integral.

(The scope of the courses is indicated by the first six chapters (excluding Stieltjes integral) of 'Principles of mathematical Analysis' by W. Rudin).

*Paper II : Analytical Geometry of two and three dimensions and Numerical Analysis.*

Note : There shall be three sections and candidates are required to attempt at least one question from each section.

*Section A :* General Equation of conic section, reduction of general equation of 2nd degree to standard forms. tracing of curves. Polar equations of conic sections.

*Section B : Analytical Geometry of three dimensions :*

Planes, straight lines, spheres, cones, cylinders, ellipsoids (standard equations and tangent planes).

(Treatment by rectangular coordinates only).

*Section C : Numerical Analysis :*

Finite differences, interpolation, extrapolation and inverse interpolation. Solution of difference equations.

*Paper III : Differential equations and Dynamics.*

There shall be two sections and students will be required to attempt at least two questions from each section.

*Section A : Differential equations.*

Differential equations of first order and first degree. Bernoulli's equation. Ordinary linear differential equations with constant coefficients. Equations of the first order but not of first degree. Clairaut's equation. Homogeneous linear differential equations with variable coefficient.

*Section B : Dynamics*—Velocity and Acceleration (radial and transversal, tangential and Normal). Newton's laws of motion. Rectilinear motion. Relative velocity, simple Harmonic motion. Hook's Law. Central orbits under inverse square law. Impulse. Work and energy. Constrained motion. Projectiles. Direct impact of smooth bodies.

**Books recommended :**

1. Principles of Mathematical Analysis : W. Rudin
2. Theory of Infinite Series : P.L. Bhatnagar
3. Coordinate Geometry : Ram Ballabh
4. Coordinate Geometry : Gorakh Prasad and H.C. Gupta
5. A Text Books of Coordinate Geometry : Mehra, Jain etc.
6. Coordinate Geometry of 3-dimensions : Bell
7. Analytical Solid Geometry : Cheema and Mathur
8. Coordinate Geometry of 3 dimensions : Shantinakaran
9. Numerical Analysis : Scarborough
10. Calculus of Observations : Whittaker and Robinson
11. Differential Equations : Ray and Sharma
12. Differential Equations : Murray
13. A Text book of Dynamics : M. Ray
14. A Text book of Dynamics : Kapur and Gupta

## APPENDIX 'V' (a)

*B.Sc. (Hons.) Pt. I Exam., 1973*

There shall be three papers, each of three hours duration. Each paper shall carry 50 marks in Faculty of Science and in Faculty of Arts, the three papers I, II and III shall carry 33, 34 and 33 marks respectively,

*Paper I : Algebra :*

Groups : Definition and simple, properties Sub-groups. Cycle subgroups. Cosets. Lagrange's theorem on the orders of subgroup. Permutations group. Homomorphism, Isomorphism, endomorphism and automorphism. Cayley's theorem. Normal sub-groups and quotient sub-groups.

Ring's Integral Domain, characteristics. Residual class rings. Ideals, prime ideals and Principal ideals.

Polynomial rings. Principal Euclidean domain and unique factorisation theorem.

Fields, subfields. Prime fields. Quotient field of an integral Domain.

Finite Dimensional, vector Spaces. Linear dependence and independence. Basis under Transformations.

*Matrices and Determinants* : Algebra of Matrices, Determinants up to fourth order and their fundamental properties. Inverse of a matrix. Application to system of Linear equations. Equivalent Matrices and Rank of a matrix.

*Paper Second : Calculus :*

*Note* : The paper shall consist of two Section and candidates are required to attempt at least two questions from each section.

**Section A** : Same as B.Sc. Pass Second Yr. Exam. 1972.

(In 1970 edition)

Maxima and minima of Several Variables

**Section B** : Same as B.Sc. Pass Second Yr. Exam. 1972

(1970 Edition)

*Paper III : Vectors, Statics and Hydrostatics :*

*Note :* There shall be two sections and candidates shall be required to attempt at least two questions from each section.

*Section A Vectors and Statics :*

*Vectors :* Definition ; Graphical representation ; Algebra of vectors (addition ; commutative, associative and distributive laws) Cross and Dot products of two or three vectors, Gradient, divergence ; and Green's Stokes and Gauss' Theorems.

*Statics :* General conditions of equilibrium of a body under a system of co-planar forces, Friction ; centre of gravity ; common catenary and virtual work.

*Section B : Hydrostatics :*

Fluid pressure, Pressure on immersed surfaces ; centre of pressure, Conditions of equilibrium of a floating body including metacentric formulas, Equilibrium of gaseous liquids (excluding capillarity and oscillation of floating bodies.)

*Books Recommended :*

1. Abstract Algebra ; Shanti Narayan
2. A First Course in Abstract Algebra ; Kapur and Gupta,
3. Modern Algebra ; Sharma and Seth
4. Higher Algebra ; Ray and Sharma
5. Higher Algebra ; Mehra and Others
6. Differential Calculus ; Gorakh Prasad
7. Differential Calculus ; Shanti Narayan
8. Differential Calculus ; Gautam and Mishra
9. Integral Calculus ; Gorakh Prasad
10. Higher Integral calculus ; Prasad and Prasad
11. अवकलन गणित : Shanti Narayan  
(Translated by J.L. Sharma)
12. समाकलन गणित : Shanti Narayan  
(Translated by Laljaram)

13. Vector Analysis : Weatherburn
14. Elementary Vector Analysis : Gupta and Others
15. Vector Analysis : Thakur, Sinha and Others.
16. Text Book of Statics : R.S. Varma
17. Statics : A.S. Sinha
18. Statics : S.C. Mitra
19. Statics : Bhatt and Jain
20. Hydrostatics : B.N. Prasad
21. A Text Book of Hydrostatics : Ray

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### APPENDIX V (b)

#### *B.Sc. (Hons.) Pt. II Exam., 1974*

There shall be three papers each of 3 hours' duration. Each paper shall carry 50 marks in Faculty of Science and 33, 33 and 34 respectively in Faculty of Arts.

#### Paper I : *Analysis* :

Real and complex number system. Finite, countable and uncountable sets. Metric spaces, compact sets, perfect sets and connected sets. Sequences and series. Continuity. Differentiability and concept of Riemann integral.

(The scop of the course is indicated by the first six chapters (excluding Stieltjes integral) of 'Principles of mathematical Analysis' by W. Rudin).

#### Paper II : Analytical Geometry of two and three dimensions and Numerical Analysis.

Note : There shall be three sections and candidates are required st attempt at least one question from each section:

Section A:—General Equation of conic section. reduction of general equation of 2nd degree to standard forms

tracing of curves. Polar equations of conic sections.

**Section B:—Analytical Geometry of three dimensions :**

Planes, straight lines, spheres, cones, cylinders, ellipsoids (standard equations and tangent planes).

(Treatment by rectangular coordinates only)

**Section C:—Numerical Analysis**

Finite differences, interpolation extrapolation and inverse interpolation. Solution of difference equations.

**Paper III : Differential equations and Dynamics.**

There shall be two sections and students will be required to attempt at least two questions from each section.

**Section A : Differentirl equations.**

Differential equations of first order and first degree. Bornoulli's equation with constant coefficients. Equation of the first order but not of first degree. Clairaut's equation. Homogeneous linear differential equations with variable coefficients.

**Section B : Velocity and Accelaration (radial and transversa tangential and Normal). Newton's laws of motion Rectilinear motion. Relative velocity. Simple Harmonic motion. Hooke's Law. Central orbits under inverse square law. Impuse. Work and energy. Constrained motion. Projectile. Direct impact of smooth bodies.**

**Books Recommended :**

1. Principles of Mathematical :  
Analysis W. Rudin
2. Theory of Infinite Series : P.L. Bhatnagar
3. Coordinate Geometry : Ram Ballabh
4. Coordinate Geometry : Gorakh Prasad and  
H.C. Gupta
5. A Text Book of Coordinate :  
Geometry : Mehra, Jain etc.

6. Coordinate Geometry of  
3-dimensions : Bell
7. Analytical Solid Geometry : Cheema and Mathur
8. Coordinate Geometry of  
3 dimensions : Shantinakaran
9. Numerical Analysis : Scarborough
10. Calculus of Observations : Whittaker and Ro-  
: binson
11. Differential Equations : Ray and Sharma
12. Differential Equations : Murray
13. A Text Book of Dynamics : Kapur and Gupta

## APPENDIX VI

B.A. Honours Pt. I Exam, 1973

No Change

Same as for B.A. Hons. Part I Exam., 1972

B.A. Honours Pt. II Exam., 1974

No. Change

Same as for B.A. Hons. Pt. II Exam., 1973

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## APPEDIX VII

M.A./M.Sc. Previous Exam., 1972

No Change

(Same as for Examination 1971)

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## APPENDIX VIII

M.A./M.Sc. Final Exam., 1973

No Change

(Same as for Examination 1972).

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## APPENDIX IX and X

*First Year B.Sc., B.Ed. Exam., 1972.*

(Mathematics)

There shall be two papers each of 3 hours duration. Each paper will carry 75 marks (15 internal and 60 external) Each question paper shall be divided into two sections and the candidate will be required to attempt at least two questions from each section.

Paper I : Algebra and Coordinate Geometry

Paper II : Calculus and mechanics.

## PAPER I

*Section A : Algebra (Sets, Relations, Functions and Number System.)*

Sets, sub-sets and their compliments. Union and intersection of finite number of sets and their properties such as associativity, commutativity, distributivity and Demorgan's law. Venn diagram.

The concept of relation. Equivalence and order relations. Mapping-functions. Injection, surjection and Bijections, Binary relation, Inverse relation and Inverse function.

Natural numbers, Peano's Axioms. Mathematical induction. Integers defined in terms of natural numbers. Order relation in integers. Prime integers. Residue class modulo positive integers. Rational numbers in terms of integers and their simple properties.

*Section B—Coordinate Geometry.*

Circles including orthogonal circles and radical axes. Conic sections (Parabola, ellipse and Hyperbola), their equations, diameters, tangents, normals, chords of contacts and polars; asymptotes of a hyperbola and conjugate hyperbola.

(To be treated in rectangular coordinates only).

## PAPER II

*Section A : Calculus*

Concepts of limits, functions and their derivatives. Geometrical significance of  $dy/dx$ . Differentiation of simple algebraic, circular and inverse circular, exponential and loga-

rithmic functions. Derivative of composition of functions. Second order derivative and their application to mechanics.

Integration as anti-derivative. Integration of simple algebraic, circular, exponential and logarithmic functions. Integration by parts and simple cases of integration by substitution and breaking into partial fractions. Simple cases of definite integral and its geometrical interpretation.

### *Section B : Mechanics.*

Forces, velocity and acceleration. Their representation as directed line segments, their resolution and composition (Parallelogram law and triangle law). Lami's theorem. Equilibrium of a body under three forces; parallel forces and moments.

Rectilinear motion under uniform acceleration. Vertical motion under gravity. Newton's laws of motion. Rectilinear motion on an inclined plane.

### *Books recommended :*

1. Coordinate Geometry : Patni and Singhvi (Ramesh Book Depot, Jaipur)
  2. Coordinate Geometry : S.L. Loney (Macmillan)
  3. A Text Book of Coordinate Geometry : Mehra, Jain, Bhatt & Bhargava.
  4. Elementary Calculus : Patni and Gaur (Ramesh Book Depot, Jaipur.)
  5. Statics : Mehra and others (Ramesh Book Depot, Jaipur)
  6. Elementary Mechanics Pt. I : S.R. Verma.
  7. Elements of Statics : S.L. Loney.
  8. Elementary Dynamics : M.C. Gupta and Girraj Prasad (Ramesh Book Depot, Jaipur).
  9. Elements of Dynamics : S.L. Loney.
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*Second Year B.Sc., B.Ed. Exam., 1973**(Mathematics)*

There shall be three papers, each of three hours duration. Each paper shall carry 50 marks (10 internal and 40 external).

*Paper I : Algebra :*

Groups : Definition and simple properties. Sub-groups, Cyclic subgroups, cosets. Lagrange's theorem on the orders of sub-group. Permutation group. Homomorphism, Isomorphism, endomorphism and automorphism. Gayler's theorem. Normal sub-groups and quotient sub-groups.

Rings, Integral Domain, characteristics. Residual class rings. Ideals. Prime ideals and Principal ideals.

Polynomial rings, Principal Euclidean domain and unique factorisation theorem.

Fields, subfields. Prime field. Quotient field of an integral Domain.

*Matrices and Determinants :* Algebra of Matrices. Determinants upto fourth order and their fundamental properties, Inverse of a matrix. Application to system of linear equations. Equivalent Matrices and Rank of a Matrix.

*Paper II : Calculus :*

*Note :* The paper shall consist of two sections and candidates are required to attempt at least two questions from each section.

*Section : A Differential Calculus :*

Functions of the real variable. Examples of functions. Limit of a function. Continuous functions. Successive differentiation. Leibnitz's theorem. Rolle's theorem. Mean value theorems (Lagrange's and Cauchy's form) Taylor's and Maclaurin's Theorems. Taylor's series. Indeterminate forms. Use of L'Hospital's rule.

Partial differentiation; Partial -derivative of a function of several variables and their geometrical interpretation. Euler's theorem. Differentials; total differentials, approximation by differential. Derivative of an implicit function Directional derivative. Tangent planes. Taylor's Theorem for a function of two variables.

Some applications of calculus—tangents and normals, asymptote, curvature of plane curves, singular points. Envelopes. Tracing of simple curves in rectangular and polar coordinates, Maxima and minima of functions of one or two variables.

*Section B*—Integral calculus : Evaluation of Integrals, standard forms, methods of Integration substitution by parts and by partial fractions. Easy reduction, formulae. Definite integral with its properties. Anti-derivative and the indefinite integral, Fundamental theorem of integral calculus. Approximation of integrals (Simpson's rule and trapezoidal rule).

Applications of integration to areas in rectangular and polar coordinates, the length of a plane curve, volumes and surfaces of solids of revolution, Double and triple integrals (simple cases).

### *Paper III : Vectors, Statics and Hydrostatics.*

*Note :* There shall be two sections and candidates shall be required to attempt atleast two questions from each section.

#### *Section A : Vectors and Statics :*

Vectors : Definition : Graphical representation; Algebra of vectors (addition : commutative, associative and distributive laws) Cross and Dot products of two or three vectors.

Statics: General condition of equilibrium under a system of co-planar forces. Friction; centre of gravity; common catenary and virtual work.

*Section B : Hydrostatics :*

Fluid pressure, pressure on immersed surfaces, centre of pressure. Conditions of equilibrium of a floating body including metacentric formulae, Equilibrium of gaseous liquids (excluding capillarity and oscillation of floating bodies).

*Books recommended :*

1. Abstract Algebra : Shantinakaran
2. A first course in Abstract : Kapur and Gupta
3. Modern Algebra : Sharma and Seth
4. Higher algebra : Ray and Sharma
5. Higher Algebra : Mehra and Others
6. Differential Calculus : Gorakh Prasad
7. Differential Calculus : Shanti Narayan
8. Differential Calculus : Gautam and Mishra
9. Integral Calculus : Gorakh Prasad
10. Higher Integral Calculus : Prasad and Prasad
11. अवकलन गणित : Shanti Narayan (Translated by J. L. Sharma)
12. समकलन गणित : Shanti Narayan (Translated by Lajjaram)
13. Vector Analysis : Weatherburn
14. Elementary Vector Analysis : Gupta and others
15. Vector Analysis : Thakur, Sharma and others
16. Text Book of Statics : R.S. Verma
17. Statics : A.S. Sinha
18. Statics : S.C. Mitra
19. Statics : Bhatt and Jain
20. Hydrostatics : B.N. Prasad
21. A Text Book of Hydrostatics by Ray.

*Third Year B.Sc., B.Ed., Exam., 1974 (Mathematics)*

There shall be three papers each of 3 hours duration. Each paper shall carry 50 marks (10 internal and 40 external).

*Paper I: Analysis :*

Real and complex number system. Finite, countable and uncountable sets, Metric spaces, compact sets, perfect sets and connected sets. Sequences and series. Continuity, differentiability and the concept of Riemann integral.

(The Scope of the course is indicated by the first six chapters (excluding Stieltjes integral) of 'Principles of Mathematical Analysis' by W. Rudin).

*Paper II: Analytical Geometry of two and three dimensions and Numerical Analysis.*

*Note :* There shall be three sections and candidates are required to attempt atleast one question from each section.

*Section : A :* General equations of conic section, reduction of general equation of 2nd degree to standard forms, tracing of curves. Polar equations of conic sections.

*Section : B : Analytical Geometry of three dimensions :*

Planes, straight lines, spheres, cones, cylinders, ellipsoids (standard equations and tangent planes).

(Treatment by rectangular coordinates only).

*Section C : Numerical Analysis :*

Finite differences, interpolation, extrapolation and inverse interpolation. Solutions of difference equations.

*Paper III : Differential equations and Dynamics :*

There shall be two sections and students will be required to attempt atleast two question from each section.

*Section A : Differential equations :*

Differential equations of first order and first degree. Bernoulli's equation. Ordinary linear differential equations with constant coefficient Equations of the first order, but not of the first degree. Clairaut's equation. Homogenous linear differential equations' with variable coefficients.

*Section B : Dynamics :*

Velocity and Acceleration (radial and transversal, tangential and normal). Newton's law of motion. Rectilinear motion. Relative velocity, Simple Harmonic motion. Hooke's law. Central orbits under inverse square law. Impulse, work and energy. Constrained motion, Projectiles. Direct impact of smooth bodies.

**Books recommended :**

1. Principles of Mathematical Analysis : W. Rudin
  2. Theory of Infinite Series : P.L. Bhatnagar
  3. Coordinate Geometry : Ram Ballabh
  4. Coordinate Geometry : Gorakh Prasad and H.C. Gupta
  5. A Text Book of Coordinate Geometry : Mehra, Jain etc.
  6. Coordinate Geometry of 3 dimensions : Bell
  7. Analytical Solid Geometry : Cheema and Mathur
  8. Coordinate Geometry of three dimensions : Shantinayayan
  9. Numerical Analysis : Scarborough
  10. Calculus of Observations : Whittaker and Robinson
  11. Differential equations : Ray and Sharma
  12. Differential equations : Murry
  13. A Text Book of Dynamics : M. Ray
  14. A Text Book of Dynamics : Kapur and Gupta
-

*Fourth Year B.Sc. (Hons)., B.Ed., 1975 (Mathematics)*

There shall be three papers, each of 3 hours duration carrying 100 marks (20 internal and 80 external).

*Paper I : Algebra :*

Finite Dimensional Vector Spaces. Linear Dependence and Independence. Basis. Linear Transformation.

2. Calculus : Maxima and minima of several variables.
3. Vectors : Gradient, divergence, curl, Green's, Stoke's and Gauss Theorems.
4. Dynamics : Motion in a resisting medium, Revolving curves.

**Books recommended :**

1. Survey of Modern Algebra by Birkhoff and McLane
2. Mathematical Analysis : Shantinathan
3. Vector Analysis Vol. I & II—Weatherburn
4. Dynamics of a particle and rigid bodies—Loney

*Paper II : Statistics :*

Meaning and scope of Statistics. Sampling. Collection, classification and presentation of numerical data. Measures of central tendency and dispersion. Skewness,

Binomial, Poisson and normal distribution, Probability. Testing the hypothesis— $\chi^2$  test and t-test.

**Books recommended :**

1. Statistical Analysis—Allen L. Edwards (revised edition (Holt, Rinehart and Winston, New York).
2. Element of Probability—S.K. Gupta N.C.E.R.T. Publication.
3. Statistics : Methods and applications—John I. Griffin (Holt, Rinehart and Winston, New York).
4. Foundations of statistics—O.P. Bajpai (Asia Publishing House),
5. Introduction of the theory of statistics : A.M. Mood and F.A. Graybill (Mc. Graw Hill).



**Paper III :***History of Mathematics :*

Euclid's elements, Greek Mathematics after Euclid. Hindu and Arabian mathematics. Contribution of Archimedes, Galileo, Kepler, Derorgue, Papcal, Napier, Descartes, Fermat, Walter, Barrow, Newton and Libritz Trend of mathematical development from the Intuition and Formalism of 1700 to the Rigour of 1930.

(Emphasis should be given on historical background rather than on mathematical details).

1. An introduction to the History of mathematics by Howard Eves (Holt, Rinehar and Winston, New York).
2. A history of elementary mathematics, by Florian Ca jori (Macmillan, London).

## APPENDIX IX

(Ref. Reso. No. 21 dated 8-2-71 of faculty of Science)

### MINUTES OF THE MEETING OF THE BOARD OF STUDIES IN BOTANY HELD ON 23-9-70 AT 12 NOON, AT THE UNIVERSITY OFFICE, JAIPUR.

#### Present

1. Dr. B. Tiagi (Convener)
2. Dr. S.K. Tandon
3. Dr. D. Gupta
4. Sh. R.K. Bhartiya (Special Invitee)
5. Dr. H.C. Arya (Special Invitee)

1. Under Section 34 (4) (iv) of the University Act, the Board elected Dr. D. Gupta as a member other than the convener of the Board of Studies to serve on the Committee for the Selection of Examiners in the subject for the year 1971.

2. The Board went through the reports of Examiners and question paper set for the examination of 1970 and offered no comments.

3. The Board scrutinised the statements of qualifications and teaching experience etc. of teachers (received from University Teaching Departments, University colleges, affiliated institutions and other Universities) for inclusion in the revised panel examiners for 1971 and revised the panel accordingly.

4. The Board recommended courses of Study and text books in Botany for the following examinations together with changes in Regulations and Ordinances where necessary—

1. Pre-University Examination, 1972—No change
2. B.Sc. pass First Year Exam. of 1972—No change

3. B.Sc. (Pass) Second Year Examination of 1973.—No change.
4. B.Sc. (Pass) Final Year Examination of 1974.—No change
5. M.Sc. Prev. and Final Examination of 1972 and 1973 respectively—No change except revision of special Group (f) syllabus for Plant Ecology paper VII and VIII (enclosed)
6. B. Sc. (Hons.) Pt. I & II Exam. of 1973-74—No change. No suggestions were received from the teachers.

5. The Board considered the following suggestions of the Vice-chancellor made by him in consultation with the convener of the Examinations Reforms Committee—

- A. Regarding award of Sessional marks, these may be awarded on the basis of Articulation, Comprehension and Objective Tests of the students as per details given below :

*Articulation—4 marks*

Each student may be required to write atleast one essay on the subject each term. This may be assessed by 2 independent teachers independently and marks recorded. Marks may be declared publicly and if any student feels aggrieved he may be explained what that particular award given.

*Comprehension—3 marks*

A test may be conducted each term to examine whether the students have picked up the appropriate expression, and have understood the subjectmatter.

*Objective Test—3 marks*

Under this category marking may be done but the marks may not be shown to the candidate. But the solution may be written by the teacher and posted on the notice board so that the students may

know the correct answers. If this rational basis is adopted there is a change of increasing the quantum of internal assessment.

B. As regards syllabus at the Post-graduate level I suggest that—

- (i) a list of full and half courses may be prepared according to the availability of teaching competence.
- (ii) it may be possible for a student to offer two full courses as a topic to give specialisation in that topic. Such a student would prepare himself for research in this topic.
- (iii) a student who wishes to learn the subject for becoming a teacher, he may offer 4 half courses covering a variety of topics to have an extensive view of the subject. In fact the students may have to choose one full and two half courses.

C. For very few bright students it may be suggested that they may be encouraged to do some self-study on pre-assigned topics which are not included in their curriculum and they may be assessed entirely on that as far as sessional marks are concerned.

Resolved to recommended the following regarding (A) award of Sesional marks on the basis of articulation, Comprehension, and objective tests :—

*Articulation (4 marks)*—Each student may be required to answer one question paper in a session or the subject of each of the questson papers as prescribed in the syllabus. This may be assessed by two teachers independently and marks recorded.

*Comprehension (3 marks)*—One test may be conducted during the session for each paper separately to find whether the students have picked up the appropriate expression; and have understood the subjectmatter.

*Objective test (3 marks)*—One objective test may be conducted during the session for each paper separately.

(B) Regarding the syllabus at the Post-Graduate level, the Board agreed with the suggestion in principle. More details however are needed to work out the details of courses.

(C) The Board agreed with the suggestion in principle.

6. It was reported that Academic Council, vide its Res. 35 dated 21-4-70 had accepted the following draft resolution proposed by Dr. Dayakrishna, Chairman Examination Reforms Committee vide his letter No. Acd/c/-1082 dated 17-4-70 as a result of discussions in the meeting of the Examination Reform Committee held on 17th April, 1970 :—

“Resolved that in the interest of raising standards of teaching and examinations and award of degrees the Board of Studies may prepare alternative Schemes of courses and Examinations in their respective subjects to be implemented as early as possible.”

The Board agreed with the above resolution. However it was felt that the suggestion was not clear and more details were required.

7. The Board considered the following recommendation No. 10 (ii) dated 29-9-1969 of the B. O. S. in chemistry as desired by the Faculty of Science vide its Res. No. 11 dated the 31st January, 1970—

“The Board considered the proposal to change the ratio of marks of theory to practical from 4:2 to 3:2 in M.Sc. Final exam. as is the practice in almost all the Universities in the country. Resolved to recommended that the proposals be accepted and maximum marks for theory papers be 75, the total being 300 marks for four theory papers. The practical marks be 200 as at present.”

The Board agreed to a change in ratio of marks of theory to practical from 4:2 to 3:2 in the M.Sc. Examinations.

8. The Board considered the following recommendation No. 10 (c) dated the 7th Nov. 1969 of the B.O.S. in Physics, as desired by the Faculty of science vide its resolution No. 14 dated 31-1-1970—

“That in M.Sc. examination, it should not be necessary for the candidates to get a minimum of 25% marks in each paper and resolved that the condition for passing the M.Sc. examination be deleted.”

The Board did not agree with the above recommendation.

9. The Board considered a complaint dated 20th April, 1970 received from the Principal, Govt. college, Ajmer and other affiliated Colleges against the question paper on Botany Paper VII (Plant Ecology) for M.Sc. (Final) examination, alongwith the remarks of the Papersetter to whom a reference was made.

The Board revised the Syllabus of special paper on Plant Ecology for the M.Sc. Exam. in order to remove mix-up and overlapping in the paper VII and VIII (Revised Syllabus enclosed herewith.)

10. The Board considered a complaint dated 23rd April 1970 received from the Principal, Govt. college, Ajmer and other colleges against the question paper on Botany Papers VII and VIII—Paper VIII for the M.Sc. (Final) Examination, alongwith the remarks of the Papersetter, to whom a reference was made.

The Board resolved that there was no mix-up in the Syllabus of the two papers and as such the revision of the Syllabus in the paper was not considered necessary.

11. The Board considered a scheme of B.Sc., B.Ed. examination, together with the draft Ordinances/Regulations and the Syllabi for the same as proposed by Principal, Regional college of Education vide his letter No. F. 9—196/70/8576 dated the 29th July, 1970.

The Board resolved to form a committee consisting of the following members to look into the Syllabus thoroughly :

1. Dr. B. Tiagi.
2. Dr. S.K. Tandon.
3. Sh. R.K. Bhartia.
4. Dr. H.C. Arya.

The above committee examined the proposed Syllabus at its meeting held on 12th January, 1971 and made recommendations for its revision. It was resolved that the Sessional Exam. (Internal assessment) be deleted from B.Sc. B.Ed. and B.Sc. B.Ed. Hons. Course. The committee decided that the revised Syllabus be submitted for adoption to the Faculty of science, 1971.

(Revised Syllabus sent herewith).

Sd/-B. Tiagi

(Convener)

Reference Res. No. 4 of the Board of studies

*Special Group (f) Plant Ecology*

PAPER VII

Autecology and Synecology

*Autecology :*

Environmental characters in relation to autecological studies; the soil factor—parent material; Organic matter; soil as a biological system; soil moisture; soil solutes, soil development. Climatic factors—The water factor : atmospheric moisture, precipitation, soil moisture; classification of plants based on water relationship, role of water in plant reproduction. fertilization, pollination and dissemination. Temperature and light factor : importance of temperature and light to plants, therm—and photoperiodism, temperature and light variation, temperature and light measurement and control, temperature and moisture in relation to plant distribution. Atmospheric factor : composition, soil aeration and its physiology, wind and windbreaks, wind pollination and dissemination. Atmospheric pollution. Classification of climates : microclimate, soil and atmospheric characters of microecology. Biotic factor : biotic potentiality and environmental resistance. Competition, symbiosis, animals as biotic factors Epiphytes, lichens, parasitism, mycotrophy, insectivorous plants, biological control, homeostasis. The Fire factor.

Pyric factors : Environmental complex, holocoexotic concept, dynamism, factor interaction. Ecological adaptation and evolution, Ecotypic concept. cytological breeding behaviour. Measurement of morphological characters, population characteristics. Anatomical features and their variation in relation to environmental factors. Pollination and seed production. Reproductive capacity : seed output, germination behaviour, dormancy, viability, seedling mortality, growth and pevelodment in relation to environment. Weeds.



*Synecology :*

Plant succession, concept of succession, methods of studying succession, analysis of plant succession, dynamics of succession, descriptive aspect of plant succession. Analytic concept. Floristic composition. Phenology, vitality and life forms. Sociability—association, rooting habit, leaf size and margination.

Quantitative : frequency, dominance, basal area, importance value index, height profile, weight yield index.

Synthetic concept : constancy and presence, fidelity. Sampling techniques purpose and prespective in sampling, multiple plot method, plotless sampling. size and shape of plots, adeduary of sampling.

Community vegetation : classification and dynamics, floristics, ecological habitat, successional stages, physiognomy and geographical characters, Vegetation types of the World with special reference to India. Ecotone; edge effect and continuum concept. Migration in relation to long term changes.

*Special Group ( f ) Plant Ecology*

## PAPER VIII

*The ecosystem and applied ecology**The ecosystem :*

The ecosystem : the nature of ecosystem, component parts of an ecosystem, organization, structure, composition, origin and evolution, concept of ecosystem.

Habit approach of ecosystem : fresh water, marine. terrestrial ecosystem, artificial and natural ecosystem.

*Terrestrial : grassland, desert, mountain. forest and distribution in World with special reference to India.*

*Dynamics of ecosystem : energy flow in ecosystem, energy fixation by autotrophs, energy beyond the producers, flow of energy, mineral cycling, cycling of gases, hydrobiological cycling, succession of ecosystem, balance of ecosystem, energy budget.*

*biological productivity : productivity of ecosystem, productivity of land of water ecosystems, bio-and geochemical cycles. Balances and cycles in the ecosystem. mineral budget, carbon, nitrogen, water, calcium and phosphorus. Energy flow and Nature's metabolism.*

*Microorganism : ecological regulation and limiting factors of ecosystem.*

*Applied Ecology :*

*Space ecology : Nuclear radiation. Agriculture and forestry. Wild life management, Public health and welfare, conservation of natural resources. International biological programme.*

*Phytogeography : historical plant geography, distribution of plants, age and area, endemics and centers of origin of cultivated plants, Good principles in distribution of flowering plants. Theory of range of tolerance. Paleocology.*

*Biometry : sampling techniques, chi-square analysis, testing homogeneity and heterogeneity of population, test of significance-t-test and f-test, simple experimental designs, randomised block design. split plot design, and latin square design.*

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*Special Group (f) Plant Ecology*

## PAPER VII AND VIII

*Books for study :*

Billings, W.D. Plant and Environment.

Black, C.A. Soil Water Plant Relationship.

Boughey, A.S. Ecology of Population. The Mac Millan & Co., New York.

Clements, E.E. Dynamics of Vegetation. H.W. Wilson and Co., New York.

Daubenmire, R.F. Plants Environment (Autecology) Wiley Eastern (P) Ltd. New Delhi.

Daubenmire R.F. Plant Communities. Wiley Eastern Private Ltd. New, Delhi.

Good, R. Geography of Flowering Plants. Longmans. London.

Klages, K. H. W. Ecological Crop Geography. Mac Millan Co. New York.

Knight, Basic Concepts in Ecology.

Misra, R. Ecology Work Book. Oxford and I.B.C. New Delhi.

Odum, E.P. Ecology. Holt, Rinehart & Wilson, New York.

Odum, E. P. Fundamentals of Ecology. Saunders, Philadelphia.

Oosting, H.J. Study of Plant Communities. Freeman, San Francisco.

Pandey, S.C. Puri, G.S. and Singh, J.S. Research Methods in Plant Ecology. Asia Publ. House. Bombay.

Prodan, M. Forest Biometrics Pergamon Press London.

Puri, G.S. Forest Ecology. Oxford Book and Stationery Co. New Delhi.

Teuscher, H. and Adler, R. The Soil and its Fertility, Reinhold Pub. Corp., New York-

Weaver and Clements : Plant Ecology. Mc. Graw Hill Book Co. New York.

Whittaker, R.H. Plants and Ecosystem.

Wilse, Carol, G. P. Crop. Adaptation, Freeman, Sanfrancisco.

*New pattern of B.Sc. (Pass) & B.Sc.(Hons.) E.Dd. course in Regional College of Education, Ajmer.*

A committee was set up by the Governing Body of the National Council of Educational Research and Training at its meeting held on 7th July, 1969 to consider about the continuation of four year integrated B.Sc., B.Ed. science course. Members of the committee were Dr. B.D. Nag Chaudhry (Member Planning Commission), Dr. D.S. Kothari (Chairman, University Grants Commission) the Director and Joint Director to the National Council of Educational Research and Training.

The committee is in favour of continuing the four year courses. But it has recommended certain changes in the pattern of the existing course.

In this scheme, during the first three years after higher secondary or the P. U. C. students will study similar subjects as they study in three year degree course. In addition the physical science students will undergo training in Engineering drawing in the first year and workshop practice during the next two years whereas the biological science students will undergo practical training in some agriculture branch.

Education is being treated in this scheme as a discipline by itself belonging to the faculty of social sciences. It is now generally agreed that even graduates in science should be

exposed to the study of one or more of the social sciences. On this basis a paper on education is being included in the first three years of course, namely educational psychology in first year, methods of teaching and workshop in teaching in the third year. This kind of training can be extremely useful by itself even if a person does not take to school teaching.

It is obvious that after the first three years we get (a) a graduate in Physics, Chemistry and Mathematics who has some training in workshop and has studied principles of education or (b) Chemistry, Zoology and Botany who has some experience in Agriculture and also principles of education.

After three years if he leaves Regional College he may be giving the degree of B.Sc. equivalent to any other B.Sc. of Rajasthan University and should be eligible for admission to M.Sc. Such a graduate can be extremely useful for higher studies in physical sciences and biological sciences respectively. If he goes later for teaching only, this basic training will enable him to innovate and fabricate school equipment. Hence at the end of three years the student is fit to go for higher studies like M.Sc., to take up a job elsewhere or to proceed further to qualify in teaching. The facilities for this type for a B.Sc. degree do not appear to exist elsewhere or if they exist, it is a rare exception.

During the fourth year the student if he/she studies in the Regional College can study one of the science subjects; Chemistry, Physics, Mathematics, Zoology or Botany upto Honours standard. This will qualify him to teach the subjects at the higher secondary level in some of the States in India. In addition he will study one of the vocational subjects like, electronics, production processes, agricultural appliances, poultry farming, horticulture, ceramics etc. This training in a vocational subject can be useful to the student in whatever walk of life he enters. So far as school teaching is concerned, he becomes a qualified person to teach one vocational subject at school.

In addition to the above during the fourth year the student will study of other educational subjects and undergo Internship in teaching. He will get training in professional education. At the end of the fourth year the student will get the degree of B.Sc. (Hons.) B.Ed.

All such for year courses should have a rightful place within the framework of the University education and would serve to meet the specific educational needs of school education. Last year Rajasthan University has agreed to have a degree B.Sc. (Hons.) B.Ed., so no new degree is to be instituted.

While preparing the present syllabus which is just a slight modification of the science syllabus passed for the Degree of B.Sc. (Hons.) B.Ed. last year, it has been kept in mind that none of the context courses are in any way lower than the courses of three year degree course or Hons. degree of the Rajasthan University. No major change has been made in education courses.

Following is the break-up of courses in various years :

#### *First Year*

- (a) English
- (b) Regional language
- (c) Engineering drawing
- (d) Educational Psychology
- (e) Any of the two combinations
  - ( i ) Physics, Chemistry, Mathematics (Or)
  - ( ii ) Physics, Chemistry, Biology.

#### *Second Year*

- (a) Any of the two combinations :
  - ( i ) Physics, Chemistry, Mathematics.
  - Or ( ii ) Chemistry, Zoology, Botany.

- (b) Workshop including glass blowing for physical science students or an agricultural subjects for biology student.
- (c) Educational Psychology.
- (d) Methods of teaching.

### *Third Year*

- (a) Any of the three subjects as mentioned for second year.
  - (a) Phy , Chem , Meths.
  - (b) Chemistry, Zoology, Botany.
- (b) Any of the one mentioned for second year.
  - (b) Workshop or Agri. subject.
- (c) Workshop in teaching.

### *Fourth Year*

- (a) Any one of the following subjects in content :  
Physics, Chemistry, Botany, Zoology and Maths.
- (b) Workshop in teaching.
- (c) Foundations and problems of education.
- (d) One of the vocational subjects.
- (e) Intreneeship in teaching.

( Detailed syllabus is attached herewith. )

## SCHEME OF EXAMINATION FOR

<i>Proposed B.Sc. Pass</i>	—After three years of Higher Secondary Or P.U.C.
&	
<i>B.Sc. (Hons.) B.Ed.</i>	—After four years of Higher Sec. or P.U.C.

### Theory

<i>First Year</i>	M.M.	Duration of Examination.
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1. English	100	3 hours
2. Hindi	100	3 hours
3. Engineering Drawing	100	3 hours
Any one of the following combinations.		
(a) Physics, Chemistry & Biology.		
(b) Physics, Chemistry and Mathematics.		
4. Physics		
(a) 2 papers—each paper	50	3 hours
(b) Practical	50	4 hours
5. Chemistry		
(a) 2 papers—each paper	50	3 hours
(b) Practical	50	6 hours
6. Biology		
(a) 2 papers—each paper		
Zoology & Botany	50	3 hours
(b) Practical		
Botany	25	3 hours
Zoology	25	3 hours
7. Mathematics		
2 papers—each paper	75	3 hours

*Second Year*

1. Psychological foundations	100	3 hours
2. Methods of teaching	100	3 hours
3. Any one of the following combinations		
(a) Physics, Chemistry, Mathematics		
(b) Chemistry, Zoology, Botany		
( i ) Physics—2 papers—each paper	50	3 hours
( ii ) Practical	50	5 hours
(a) Inorganic	34	3 hours



(b) Organic	33	3 hours
(c) Physical	33	3 hours
Practical	50	6 hours
(iii) Mathematics-2 papers-each paper	75	3 hours
(iv) Zoology-2 papers-each paper	50	3 hours
Practical	50	6 hours
(v) Botany-2 papers-each paper	50	3 hours
Practical	50	4 hours

*Third Year*

1. Workshop including glass blowing for Phy. Chem. & Maths group	100	4 hours
or Agriculture subjects for Botany, Zoology & Chemistry group		6 hours
2. Workshop in teaching paper I	50	3 hours
3. Any one of the following examinations		
(a) Physics, Chemistry, Mathematics		
(b) Chemistry, Zoology, Botany.		
(i) Physics-2 papers-each paper	50	3 hours
Practical	50	5 hours
(ii) Mathematics-2 papers-each paper	75	3 hours
(iii) Chemistry (3 papers)		
(a) Inorganic	34	3 hours
(b) Organic	33	3 hours
(c) Physical	33	3 hours
Practical	50	10 hours
(iv) Zoology-2 papers-each paper	50	3 hours
Practical	50	6 hours
(v) Botany-2 papers-each paper	50	3 hours
Practical	50	6 hours

*Fourth Year*

## 1. Applied Sciences :

Electronics or production process or  
agriculture appliances or other agri-

culture course one paper 100 3 hours

Practical 100 3 hours

2. Workshop in teaching paper II 50 3 hours

3. Foundations of education 100 3 hours

4. Internship (Practice teaching) 200

5. Any one of the following subjects  
of Hons. standards

(a) Physics two papers each paper 100 3 hours

Practical 100 6 hours

(b) Chemistry—3 papers

(i) Inorganic 67 3 hours

(ii) Organic 66 3 hours

(iii) Physical 67 3 hours

Practical 100 10 hours

(c) Mathematics (3 papers)

(i) Paper I 100 3 hours

(ii) paper II 100 3 hours

(iii) Paper III 100 3 hours

Or

(d) Zoology (2 papers) each paper 100 3 hours

Practical 100 6 hours

Or

(e) Botany (2 papers) each paper 100 3 hours

Practical 100 6 hours

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*I Year B.Sc., B.Ed. Botany Paper*

## Unit 1. Science of Biology :

Science and scientific method, Botany and Zoology as plant and animal sciences, their scope and careers in Biology.

## Unit 2. The living world :

Origin of life, Various hypothesis, First cells-Viruses (elementary idea) Major groups of plant kingdom.

## Unit 3. The living organism :

Functional characteristics. Metabolism and self-perpetuations Structural characteristics.

## Unit 4. Organisation in plants :

Cell (elementary idea), cell division. Cell aggregates permanent tissues, tissue systems; distribution and function in angiosperms, root-stem transition secondary growth.

## Unit 5. Morphology of Angiosperms :

Important root modifications and types of stems. Parts of leaf and stipules, important modification. Flower-pollination-fertilisation. Structure and dispersal of fruits and seeds. Chemical composition of fruits and seeds. T.S. of Dicot and monocot roots, stems and leaves (Primary structure).

*Practicals :*

1. Morphology of Root, Stem, Leaf, Fruits and Seeds and a typical plant.
2. Study under the microscope of cell, cell inclusion, tissues, stems, roots and leaves. Primary and secondary growth.

3. Candidate should be able to identify and write critical notes on features of morphological and biological interest of various angiosperms organism submit their record of work done during the year.
4. Experiments to show the presence of moisture, carbohydrates, fats, proteins in fruits and seeds.

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## II Year B.Sc., B.Ed. (Botany)

### PAPER I

#### (Thallophyta)

Unit 1. Thallophyta (Bacteria, viruses, Algae, Fungi, Lichens)  
Viruses-general account, nature of virus, Bacteriophages.

Unit 2. Bacteria—Structure, modes of reproduction, physiology and economic importance.

Unit 3. Algae-general account of habit and habitat, classification and evolutionary tendencies.

Brief life history of following :

- ( i ) Myxophycetes—*Oscillatoria*, *Nostoc*, general account
- (ii) Chlorophyceae—*Chlamydomonas*, *Chlorella*, *Volvox*, *Ulothrix*, *Oedogonium*, *Spirogyra*, *Coelaecnaete*, *Hydrodictyon*, Desmids, *Chara*.
- (iii) Xanthophyceae : *Botrydium*, *Vaucheria*, Diatoms.
- (iv) Phaeophyceae : *Ectocarpus*, *Fucus*, *Sargassum* (external features only).
- ( v ) Rhodophyceae : *Batrachospermum* and *Polysiphonia* Alternation of generations in Algae.

Unit 4. Fungi—General account of structure and occurrence.  
Economic importance.

Brief life history of following :

- (i) Myxomycetas—*Plasmodiophora*
- (ii) Phycomycetes—*Saprolegnia*, *Mucor*, *Albugo*,  
*phytophthora Sclerospora*.
- (iii) Ascomycetes—*Sacchaomyces*, *Panicillium*, *Peziza*,  
*Claviceps*.
- (iv) Basidiomycetes : *Ustilago*, *Puccinia*, *Agaricus*
- (v) Deuteromycetes : *Collectotrichum*, *Fusarium*,  
*Alternaria*.

Unit 5. Lichens : General account structure, types and modes  
of reproduction, economic importance.

## PAPER II

Bryophyta. Pteridophyta: Gynosperms and Elementary  
knowledge of Paleobotany

Unit 1 Bryophyta :

Salient features, classification, morphology and brief  
life history of following :

- (i) Hapaticaeae : *Riccia*, *Marchantia*, *Porella*  
(Medothesca)
- (ii) Anthocerotae : *Anthoceros*
- (iii) Musci : *Sphagnum*, *Polytrichum*  
External features of—*Cyathodium*, *Notothyas*.  
*Plagiochasma*, *pellia*.

Distribution of Bryophytes in India.

Evolution of sporophyte and gametophyte; Alterna-  
tion of generations.

## Unit 2. Pteridophyta

Salient features, classification, distribution in India. Morphology and brief life history of following :

- (i) Lycopsidea : *Lycopodium*, *Seleginella*, *Isoetes*.
- (ii) Sphernopsida : *Equisetum*.
- (iii) Pteriospida : *Marsilea* and *Dryopteris*.
- (iv) External features of *Psilotum* and *Ophioglossum*.

## Unit 3. Gymnosperms :

Salient features, broad classification and distribution in India : Economic importance.

Morphology and life history of the following genera :

- (i) Cycadophyta : *Cycas*
- (ii) Coniferophyta : *Pinus*
- (iii) Guetals : *Ephedra*
- (iv) External morphology of *Thuja*/*Biota*.

## Unit 4. Paleobotany :

Fossils-formation; coal formation and significance. *Rhynia*, *Williamsonia* and an elementary knowledge of phylogeny of seed plants.

## PRACTICALS :

Candidates are expected to (i) Study and identify the types mentioned in Paper I and II (ii) Make suitable stained preparations-temporary and permanent for microscopic study of types mentioned (iii) Submit record of work and microscopic preparations done during the year (iv) have taken part in field work for at least one week (v) study of fossils as prescribed.

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*III Year B.Sc. B.Ed., BOTANY*

## PAPER I

Angiosperms (Morphology, Anatomy and Embryology  
Ecology)

Unit 1. (a) The flower, (structure and morphology)-organo-  
geny structure development and function of an-  
ther & ovule, Follen grains; development and  
types of embryo sacs Mono-, bi and tetra sporic  
Fertilization, Embryo geny in *Capsella*. Endos-  
perm. Seed, fruit formation –

A brief account of experimental embryology  
(Parthenocarpic fruits. Adventive embryos emb-  
ryo-culture and pollen grain germination).

(b) Apical meristems

(c) Vegetative propagation in Angiosperms.

Unit 2 A Survey of the descriptive botany (Root, stem etc)

Unit 3 Angiosperm Taxonomy :

(a) Historical development of taxenomical thought,  
general principles of classification, primitive and  
advanced characters, botanical nomenclature of  
plants.

(b) Important systems of classification of angios-  
perms e. g. Bentham and Hooker's; Engler and  
Prantl's and Hutchinson's. Origin and evolution  
of angiosperms (in brief).

(c) Diagnostic features and economic importance of  
the following families with special reference to  
the local representatives : Ranunculaceae, Mag-  
noliaceae, Papaveraceae, Cruciferae, Cappari-  
daceae, Caryophyllaceae, Malvaceae, Rutaceae,  
Tilsiaceae, Leguminosae, Rosaceae, Myrtaceae,  
Cucurbitaceae, Umbelliferae, Rubiaceae, Comp-

ositae, Asclepiadaceae, Convolvulaceae, Solanaceae, Boraginaceae, Scrophulariaceae, Acanthaceae, Verbenaceae, Labiatae, Chenododiaceae, Euphorbiaceae, Morceae, Musaceae. Palmae, Aroideae, Gramineae & Cyperaceae.

#### Unit 4 Ecology

Definition, scope; aims of study, and its relation to other Sciences, environmental factors—Climatic, edaphic, and biotic factors; effect of environmental factors on the growth and distribution of plants, biotic inter-relationship, ecosystems, communities. Plant succession. Hydrarch and xerarch, characteristic morphological and physiological features of mesophytes, hydrophytes, xerophytes and helophytes including mangroves. Applied aspects of Ecology—conservation of natural resources and survey of useful types.

### PAPER II

Physiology, Cytology, Genetics and plant breeding, Evolution.

#### Unit 1 Physiology :

- (a) Cellular Physiology : Structure of a plant cell as physiological unit of life; functions of various cell organellers, osmosis and osmotic pressure. cell membranes, and permeability ambition and its significance.
- (b) Water and soil relation in plants : Soil; types, physical and chemical composition; available water absorption and uptake of water. Loss of water from plant cells (transpiration and guttation).
- (c) Transport system in plants : The path of water and mineral salts and organic solutes in plants, movements of solution, mechanism of translo-



cation of solute in xylem; mechanism of translocation of solutes in phloem.

- (d) Enzymes : Characteristics and properties. Mode of action : common examples of plant enzymes catalysing reaction in processes like Photosynthesis, Respiration and digestion.
- (e) Photo-synthesis-Photosynthetic pigments; factors affecting photosynthesis; law of limiting factors Mechanism of photo-synthesis photosynthetic and chemo-synthetic bacteria, Photosynthesis and evolution.
- (f) Carbohydrate metabolism; Plant carbohydrates; carbohydrate transformation in plant; translocation and storage of carbohydrate utilisation and role of carbohydrates-plants.
- (g) Fat Metabolism : Fats and fatty acids; synthesis of glycerol, fatty acids and fats, organic acid metabolism; role of lipids in plants.
- (h) Nitrogen Metabolism : Sources of nitrogen; synthesis of amino acids and proteins, nitrogen cycle in nature.
- (i) Respiration : Aerobic and anaerobic respiration; mechanism of respiration; respiratory quotient, factors affecting respiration physiological significance of respiration.
- (j) Growth and Development : Vegetative growth : factors affecting vegetative growth; Hormones and their role in growth processes including growth movements (Phototropism and geotropism) : application of growth substances in horticulture, factors affecting reproductive growth; photoperiodism and vernalisation; seed germination and dormancy, longevity of seeds.

(k) Plant movements; Tactic, nastic, tropic and turgor movements; nutation.

(I) Reproduction : Sexual, vegetative propagation.

#### Unit 2 Cytology :

(a) Structure and organisation of the cell : cytoplasmic organcells with reference to their structure and function; elementary chemistry of nucleus (RNA & DNA), chromosomes and genes.

(b) Mitosis and Meiosis-descriptive study, study of the stages; significance.

(c) Crossing over, linkage and chromosomal aberrations.

(d) Polyploidy.

#### Unit 3 Genetics :

(a) Mendel's experiment—Mono and dihybrid ratios, Mendel's laws of inheritance; cytological basis of Mendelism, incomplete dominance.

(b) Chromosome and gene mutation.

(c) Role of DNA in heredity (Protein synthesis)

(d) Determination of sex.

(e) Population genetics; Hardy-weinsberg law.

#### Unit 4 Plant breeding :

(a) Nature and goals of plant breeding-improvement of crop varieties.

(b) Methods of plant breeding-plant introduction; selection and hybridization.

(c) Hybrid vigour.

#### Unit 5 Evolution :

(a) Origin of life : geological time table.

(b) Theories and evidences of evolution; fossil plants.

(c) Genetic basis of evolution.

### Practicals

1. Plant physiology experiments : Set and comment upon the experiment in plant physiology as listed below :  
Osmosis—Potato osmoscope; egg osmoscope; plasmolysis.

Root pressure : Demonstration Experiment.

Transpiration—U-tube and Ganong's potometers; unequal transpiration from the two surfaces of a dorsiventral leaf; porometer expt; suction due to transpiration, relation between transpiration and absorption; study of stomata.

Photosynthesis : evolution of  $O_2$  , Light,  $CO_2$  and chlorophyll essential factors for photosynthesis; separation of plastid pigments by paper chromatography.

Respiration : Production of  $CO_2$  and heat during respiration; loss of dry weight during respiration; anaerobic respiration; Ganong's respirometer for respiratory quotient; Alcoholic fermentation by yeast.

Enzymer—Activity of sucrose, catalase, Amylase and Bromelain.

Plant movement : Geotropism; Phototropism; Hydrotropism; Protoplasmic streaming; use of clinostat.

Growth : Measurement of growth by arc auxanometer.

Mineral Nutrition—Role of mineral elements in plants (sand/water/culture expt).

2. Plant Ecology : Study the morphological and anatomical features of mesophytes, hydrophytes and xerophytes; study of plant-distribution in relation to ecological condition in the field, communities.

Candidates are required to :

3. identify the morphology of plants of the economic importance and the family to which they belong.
4. prepare and submit a representative collection of local angiospermic flora of atleast 200 specimens which relevant notes and descriptions.
6. to take part in field work for atleast one week under tutition and
6. submit records of work done during the year.

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*IV Yr. B.Sc., B.Ed. Hons. BOTANY*

PAPER I

Microbiology, Plant Pathology & Economic Botany.

Unit 1. (a) Micro-biology

History of Microbiology

Survery of microbial life-Bacteria, moulds, yeasts, viruses, Rickettiseae, protozoa, algae.

Importance of mircrobiology

Applied microbiology-antibiotics

*Neurospora* and genetical stubies

Bacteria : nomenclature and classification, Morphology  
Reproduction, physiology-

Microscopic techniques, culture, preparation for study. Role in study of enzymes, modiflcation mutations, genetics.

(b) Plant Pathology :

- ( i) Plant pathology and Human society  
Pathogens, pathogenesis.  
Physiology of pathogenicity.

- ( ii ) General account of various types of plant-diseases-fungal bacterial, viral and physiological. Symptoms and mode of control, chemical and physical.
- ( iii ) Important Plant diseases; occurrence causal organism, symptoms and controls (life history of organism not required).
  - Late blight of Potato (*phytophthora*)
  - White rust of Crucifers (*Albugo*)
  - Powdery mildew of Wheat (*Erysiphe*)
  - Bunt of wheat
  - Smuts of wheat, Dal. sugar cane (*Ustilago*)
  - Rusts of wheat (*puccinia*)
  - Cotton wilt (*Fusarium*)
  - Red rot of sugar cane (*Colletotrichum*)
  - Citrus canker (*pseudomonas citrii*)
  - Green ear disease of Bajra (*Sclerospora*)
  - Tikka disease of ground nut (*Cercospora*)
  - Tobacco mosaic disease (TMV virus)

Unit 2. Economic botany : Man's dependence on plants.

Cereals : Wheat, Maize and Paddy

Pulses : Gram and general account

Fruits : Mango, *citrus*, banana and papaya

Sugars and Starches : *Saccharum*, Manihot and Potato.

Spices : *Piper nigrum*, *capsicum*, *Cur-cuma longa*, *Zingiber officinale*, Clove, Fennel, Coriander and Saffron.

Reverages : Tea, coffee and Coccoa.

Woods : Important hard and soft woods such as Teak and Deodar; their uses

Rubber : *Heavea-*

Drugs : *Cinchona, Aconitum, Atropa, balladona, Digitalis, Eucalyptus, Artemesia, Rauwolfia, papver, cannabis and Nicotiana.*

Insecticides : *Chrysanthemum cinerariaefolium*

Essential oils : General account;

Oils and fats : General account ground nut

Fibres : Cotton, Jute.

## PAPFR II

History of Biology, Radiation Biology, Experimental botany; Museum and Laboratory techniques.

Unit 1. History of biology and recent advances in botany—general account with reference to the research done in India during the last fifty years.

Important Indian biologists.

Noble prize winners (Medicine and related fields)

Unit 2. Radiation Biology—

Radioactivity and radiations, Isotopes and tracer elements. Isotopes commonly employed in biological investigations. Detection technique. Use in plant physiology. Ecology and cytogenetics. Radiation hazards and precautions in laboratory.

Unit 3. Experimental Botany

( i ) Embryology and cytology : Embryo-cultures, adventive embryos; induced parthanogenesis and pathanocarpy; use of colchicine.

( ii ) Tissue transplantations—tissue cultures.

( iii ) Growth regulators and organ formation.

( iv ) Comaparative and quantitative ecology.

( v ) Collecting, culturing and preserving plant material—Habitats, culture media, preservatives.

- ( vi ) Laboratory, equipment, apparatus and improvisation of apparatus.
- ( vii ) Preparation for microscopic study :  
Various types of microscopes, microtomy, temporary and permanent preparations.

### PRACTICALS

1. Micro—techniques and Microtomy.
  2. Collection, preservation and mounting of specimens.
  3. Culturing bacteria and fungi.
  4. Staining of bacteria.
  5. Study of effects of antibiotics.
  6. Study of infected plants given in syllabus.
  7. Culture of organs and tissues.
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## APPENDIX X

*(Ref. Res. No 21 dated 8-2-71 of Faculty of Science)*

MINUTES OF THE MEETING OF THE BOARD  
OF STUDIES IN STATISTICS HELD ON 26th  
SEPTEMBER 1970 AT 12 NOON, AT THE  
UNIVERSITY DEPARTMENT OF  
STATISTICS, JAIPUR.

## Present

1. Dr. H.C. Gupta
2. Shri K.L. Sharma
3. Shri D. Hajela
4. Dr. B.D. Tikkiwal      (*Convener*)

1. Under Sec. 34 (4) of the University Act, the Board elected Dr. H.C. Gupta as the member of the Board of Studies to serve on the Committee for the Selection of examiners in the subject for the year 1971.

2. The Board offered the following comments after going through the reports of the examiners, and question papers set for the examination of 1970.

It should be prominently mentioned in the appointment letter to an examiner that while setting the question paper, he should follow 'Vigyan Sabdavalī' published by the Govt. of India for Hindi equivalents of technical terms. A serious view would be taken for non-compliance with this rule.

Remark : In this connection members present pointed out that resolution No. 7 (b) of last year, though approved by the various bodies concerned, has not been given effect to.

3. The Board scrutinised the statements of qualifications and teaching experience etc. of teachers (received from University Teaching Departments, University Colleges, affiliated institutions and other Universities) for inclusion in the revised panel of examiners for 1971 and revised the panel accordingly.



4. The Board considered the recommendation No. (10) (ii) dated 20-9-67 of the Board of Studies in Chemistry as desired by the Faculty of Science vide resolution No. 11 dated 31-1-70. The Board noted that such a practice already exists for compulsory papers at M.A./M.Sc. Final examination in Statistics but the practice in optional papers varies depending upon the nature of the optional papers. In view of this it agreed with the recommendation of Board of studies in Chemistry.

5. The Board did not agree with the recommendation No. 10 (c) dated 7-11-69 of the Board of Studies in Physics as desired by the Faculty of Science vide its resolution No. 14 dated 31-1-70.

6. The Board went through the instructions to examiners in practicals for the examinations of 1970 and recommended no change in them for 1971 except the following :

Instruction No. 4, to the effect that the viva-voce examination should normally be conducted after the written examination, be deleted for different examinations at under graduate and postgraduate levels.

*Remarks :* As regards printing of instructions to examiners in practicals for different subjects the Board felt that considerable economy can be affected by printing the instructions. Subject-wise at different levels of examinations. This is because a good many instructions are common to different examinations in a given subject. This will have the additional advantage of finding instructions, in a given subject at one place rather than spread up over the entire pamphlet as at present.

7. The Board went through the report of the University Grants Commission Review Committee on Statistics in Indian Universities published this year and recommended the following points for implementation :

- (i) The report on p. 29 states the following :  
“Secondly where university departments are doing both undergraduate as well as postgraduate teaching, the teaching load is rather heavy, thereby giving little time to the university professors/Readers for undertaking independent research of guiding research students.”

and again on p. 80 in its recommendation No. 16 it says ;

“Work load of teachers in the postgraduate courses should not be more than 10 hours per week.

The Board was of the opinion that in order to encourage research on a large scale it is necessary that those teachers, who are either active in research or have potentiality for research, should be given lesser workload than others.

(ii) On p.31 the report states the following :

“Two other important considerations arise in this connection, namely, whether the applied topics should be taught by a statistician who has adequate background of the field of application or by a specialist in the field who is capable of teaching the statistical methods. There is much to be said on either side and the choice depends upon the availability of personnel with the required knowledge of the field of application as well of the appropriate statistical methods. The other important consideration is the provision of facilities for getting practical experience. It is often found that fresh students who were not entrusted with practical problems in administration, industry often find it difficult to correlate their theoretical knowledge with the problems of handling new data and application of appropriate methods of analysis to draw conclusions. The practicals they do in the classes are often taken out of text-books written by foreign authors who might have given illustration from their own experience, even of antiquated data. Hence teachers may have to be provided with facilities to select appropriate current data from the country and the students also should be trained during the degree course or immediately after taking service in the practical experience of handling such data.”

To implement this recommendation of the Review Committee the Board was of the opinion that the University should take the following steps in this matter :—

- (i) The work experience be introduced for post-graduate students as well, along the lines already done for Three Year Degree Course in the final year.

- (ii) Some of the teachers in the Department be deputed in summer vacation to some applied organisations with a view to apprise them of the applied work done over there.
- (iii) Two laboratory supervisors be provided, one for postgraduate and one for undergraduate, as recommended earlier by Board and subsequently approved by the Faculties of Arts and Science.
- (iv) On page 30 the report states the following :

“These different practices make it difficult to plan a uniform syllabus of a fairly high standard at M.A./M.Sc. level. Further in admission to M.A./M.Sc. courses a high percentage of student come from mathematics course without any background in Statistics. Naturally the teaching should start from elementary as well as fundamental methods, leaving little time for teaching advanced courses.

The Board noted that in the neighbouring states of Madhya Pradesh and Uttar Pradesh there are great many colleges who offer statistics at undergraduate level. However, in Rajasthan the teaching of this subject is done only in some of the consituent colleges of the University. This Subject is quite popular in these colleges. But the number of students who could be admitted in these colleges is necessarily small. Therefore, it is necessary that some of the affiliated colleges should start the teaching of statistics at the undergraduate level at the earliest. When a large number of students with statistics graduate from the colleges, admission to M.A./M.Sc. statistics would be limited only to those who offer statistics as one of the optional at undergraduate level.

8. With regard to items 4, 5 and 7 of the agenda regarding Courses and Preparation of alternative schemes of courses and examination, the Board resolved as follows—

Since the Academic Council is going to take a decision soon as regards the examination reforms in the light of the reports of the Examination Reforms Committee, the Board was of the opinion that it should meet again after the Academic Council's decision in the matter. It should then revise various syllabi at different levels in the light of particular scheme of examination. These recommendations may be put direct before the Academic Council for implementation

from the academic year 1971-72. The Board should then also take into account the view-points of the UGC Review Committee in Statistics in this connection.

9. Pending the final decision as regards the changes in the syllabi and the scheme of examination the Board offered the following tentative suggestion in the matter. The final recommendation of the Board would be made only after the Academic Council has taken a decision in the matter as per resolution No. 8—

(A) The present courses in different syllabi be divided into half-paper courses.

(B) The working of the half paper scheme is illustrated below :—

(a)	8 courses each of 50 marks=400	
	Practical of 100 marks	
	Total 500 marks	
(b)	Work experience and report on the same	100 marks
	One written paper on Probability and statistical inference consisting of essay type questions as at present	100 marks
	One paper on all topics consisting of objective questions (questions requiring only short answers).	150 marks
	Viva-voce	100 marks
		<hr/>
	Total 500 marks	

*N.B.* : The details are given here for the scheme of examination at M.A./M.Sc. prev. statistics only. Similar schemes would be evolved for other levels.

In the existing scheme of examinations a paper is not necessarily set by the teacher concerned resulting in the stereo type teaching of topics. To avoid this the examination in different courses and practical in part (a) will be

conducted by the teaching staff of the department in two instalments one some time in December and the other some time in April/May.

To provide suitable safeguards a Board of examiners consisting of at least one external member would moderate the papers set by the teachers in each of the instalments. The Board would also moderate the examination results.

The examination in (b) part would be conducted by a Board consisting of two external and two internal examiners some time in April alongwith the examination in part (a).

*Remarks :* The present scheme as evolved by the Board judiciously combines the advantages of the present scheme of examination in operation in this University and also the scheme of examination in force in other Universities popularly known as Semester system. Though this new scheme has been suggested with special reference to statistics, a subject which is taught only in the University Department and in the constituent colleges of the University, it can very well be tried in some other subjects at properly selected Institutions of the University.

Sd/-B.D. Tikkiwal,  
Convener

## Appendix No. XI

*Ref :-Res. No. 21 dated 8.2.71. of faculty of Sc. )*

Minutes of the Meeting of the Board of Studies in Agriculture held on 22-9-70 at 12 noon, at the University Office, Jaipur.

### Present

1. Shri M. S. Chhonkar
2. Shri C. V. S. Malik
3. Shri B. S. Sharma
4. Dr. J. N. Tandon (Convener)

1. Under Section 34(4) (iv) of the University Act, the Board elected Shri B. S. Sharma, Lecturer, G.V. College of Agriculture, Sangria as a member other than the Convener of the Board of Studies to serve on the Committee for the Selection of Examiners in the Subject for the year 1971.

2. The Board observed that it was not feasible to go through all the reports of examiners and question paper set for the examination of 1970 in such a short period and therefore, resolved that the reports be circulated amongst the members and than be discussed in another meeting of the Board of Studies which may be convened before the Science Faculty meeting.

3. The Board scrutinised the statements of qualifications and teaching experience etc. of teachers (received from University Teaching Departments, University Colleges, affiliated institutions and other Universities) for inclusion in the revised panel of examiners for 1971 and revised the panel accordingly.

4. The Board recommended courses of Study of Text Books in Agriculture for the various examinations together

with changes in Regulations and Ordinances (vide Appendix 'A').

5. The Board considered the suggestions received from the teachers in response to a circular issued by the office as desired by the Academic Council vide its Resolution No. 40 dated the 15th January, 1969 and incorporated them in the Course as far as possible.

6. The Board considered the following suggestions of the Vice-Chancellor made by him in consultation with the Convener of the Examinations Reforms Committee:—

- A. Regarding award of Sessional marks, these may be awarded on the basis of Articulation, Comprehension and Objective Tests of the Students as per details given below :—

*Articulation—4 Marks*

Each student may be required to write at least one essay on the subject each term. This may be assessed by 2 independent teachers independently and marks recorded. Marks may be declared publicly and if any student feels aggrieved he may explain why that particular award given.

*Comprehension—3 marks*

A Test may be conducted each term to examine whether the students have picked up the appropriate expression, and have understood the subject matter.

*Objective Test—3 marks*

Under this category marking may be done but the marks may not be shown to the candidate. But the solution may be written by the teacher and posted on the notice board so that the students may know the correct answers. If this rational basis is adopted there is a change of increasing the quantum of internal assessment.

B. As regards syllabus at the Post-graduate level I suggest that :—

( i ) a list of full and half courses may be prepared according to the availability of teaching competence.

( ii ) it may be possible for a student to offer two full courses as a topic to give specialisation in that topic. Such a student would prepare himself for research in this topic.

( iii ) student who wishes to learn the subject for becoming a teacher, he may offer 4 half courses covering a variety of topics to have an extensive view of the subject. In fact the students may have to choose one full and two half courses.

C. For very few bright students it may be suggested that they may be encouraged to do some self-study on pre-assigned topics which are not included in their curriculum and they may be assessed entirely on that as far as sessional marks are concerned.

The convener was requested to study the possibility of introducing sessional marks in Agriculture curriculum and to submit a report to the Board of Studies in Agriculture. Another meeting of the Board of Studies in Agriculture be therefore, called before Science Faculty meets.

7 It was reported that the Academic Council, vide its Resolution No. 35 dated 21.4.70 accepted the following draft resolution proposed by Dr. Dayakrishna, Chairman, Examination Reforms Committee vide his letter No. Acd/c.1082 dated 17.4.70 as a result of discussion in the meeting of the Examination Reforms Committee held on 17th April, 1970 :—

“Resolved that in the interest of raising standards of teaching and examinations and award of degrees the Board of studies may prepare alternative Schemes of Courses and Examinations in their respective subject to be implemented as early as possible.



The Convener was requested to go through the suggestion received from the G. V. College of Agriculture, Sangaria and to submit his report before the next meeting of the Board of Studies in Agriculture to be convened before the Science Faculty meeting.

The meeting ended at 3.30 P. M. with a vote of thanks to the Chair.

## APPENDIX XII

*(Ref. Res. No. 21 dated 8-2-1971 of the Faculty of Science.)*

Minutes of the Second Meeting of the Board of Studies in Agriculture held on 16th January, 1971 at 12 noon, at the University Office, Jaipur.

### Present

1. Dr. J. N. Tondon (Convener)
2. Shri M. S. Chhonkar
3. C.V.S. Malik
4. Shri B. S. Sharma

1. Examiners' reports were examined & adopted with the following observations :

- (a) that the reports be sent to the Principals of concerned colleges.
- (b) that the office should insist on getting detailed report from all the examiners.
- (c) The encircled portions in different reports be deleted.

2. The Board considered the suggestions of the convner regarding award of sessional marks and resolved:

- (a) that there shall be two tests each of one period (45 min.) duration in each theory paper.
- (b) that each test shall carry 5 marks, making a total of 10 marks.
- (c) that these tests be conducted one in the month of October, the other by the last week of January in each session.
- (d) that atleast one week notice be given to the students by the collage regarding the scheme of the tests.
- (e) that the question paper be set by the teachers concerned.
- (f) that all arrangements for holding the tests be made by the college.

- (g) that the question paper, marks awarded and the marked answer books be sent to the University by the college for record within a fortnight of the end of the test.
- (h) that the marks awarded in the two tests be added to the marks awarded in corresponding final theory paper to assess the result
- (i) that the final theory will now carry only 40 max. marks instead of 50.
- (j) that the Pass percentage (36%) will remain unchanged.
- (k) that there shall be no sessional marks in practical.

3. The board considered the report of the convener regarding the question of raising the standard of teaching and examinations and award of Degrees and was of the view that instead of one final examination at the end of the each session there may be two examinations, each on the expiry of 5 months period on the existing examination pattern.

The Board was of the view that because this question is of fundamental nature and has financial implications, the detailed scheme shall be prepared by the Board only after the scheme in principle is accepted by the University.

Sd/-J. N. Tondon  
Convener.

# APPENDIX 'A'

A. Pre-University (Ag.) Examination, 1972  
No change

B. Pre-Professional (Ag.) Examination, 1972 except  
the following No change

(a) Page 20 Experiment No. 18 and 19 be deleted.

(b) "To determine conductivity of a liquid by conductivity Bridge (Students are required to do the practical only)".....be included, as 18 item,

(c) Experiment No.20 be renumbered as 19.

(d) Page 36, under the heading land :—

"Natural resources.....needs"  
be deleted.

(e) Page 37 of the Syllabus under the Heading  
Wages :—

included (modern Theory only) as a note only.  
C.B.Sc. (Ag.) Part I Examination, 1972

No change

except the following :

*Agronomy Paper* Page 38 under the heading soil  
moisture 5th line "Removal of excess moisture  
from field" be rewritten as "Importance of  
drainage and the methods of removal of excess  
moisture from fields."

D. B.Sc. (Ag.) Part-II Examination, 1973.

No change except the following :

*Agronomy Paper II* Page 59 of the Syllabus  
after 2nd Para and befor III Fertilizers and  
manures add as a separate Para.

"Importance of irrigation:sources of irrigation  
water, irrigation methods and types; depth and  
frequency of irrigation; loss of water from the

field in terms of percolation, see page and run off.

*Paper Live Stock Production (a) Page 64.*

Last Para 2nd line. Delete "reproduction work".

(b) Practicals (\*) Page 66. After item 14 add "Computation of ration for cattle on T.D.N. basis.

(c) item no. 15 be berenumbered as 16.

(\*) This item was anyhow left unprscribed in the syllabus meant for B.Sc. (Ag.) Part II examinations of 1971 and 1972. This may be included in these two years also and the necessary informations be sent to the principals of the concerned affiliated Agricultural Colleges and the examiner concerned of the paper,

*E. B.Sc. (Ag.) Part-III Examination, 1974.*

*Dairying Paper(a)Page 81 under heading dairy economics 2nd line.*

"Organizations of market, milk industry" be deleted and add "co-operative milk supply unions. Problems of Urban milk supply.

Dairying Practical

Page 83 of the Syllabus.

(a) delete 2 f, g and h.

2. The detailed courses of Theory and Practical portions of Paper 5 Plant Pathology and microtriology and paper 6. Agricultural engineering be published as they have been left unpublished in the syllabus of 1970 edition

3. Agricultural Engineering Paper (on the basis of 1969 edition.

The following be deleted.

Page 94 (a) under the heading irrigation d, f, h, i. and j.

(b) item No. 7 on Page 95 "Drainage"

(c) The topics of irrigation of page 94 and 95 be renumbered.

4. No implication in terms of stapes, equipment and space will occur as a result of the suggested changes in the existing scheme examination.

## APPENDIX XIII

(Ref : Res. No. 21 dated 8-2-72 of Faculty of Science)

Minutes of the meeting of teachers in mathematics who are members of the Faculties of Arts and Science, held on Sunday, the 7th February, 1971, at 2.00 p.m. in the University Department of Mathematics, Jaipur. (Ref. Registrar letter No. F5-2/71 (Aca.1) dt.(23-1-71)

The following were present :

1. Dr. G.C. Patni (In Chair)
2. Mrs. Santosh R. Luthera
3. Shri S.N. Dube
4. Dr. V. Shankram
5. Shri G. C. Saxena
6. Shri Hari Prasad
7. Shri S.S. Lal Mathur
8. Shri Kailash Chandra Jain
9. Shri S.S. Sodhi
10. Shri Champa Lal Mathur
11. Dr. B.R. Luthera
12. Shri B.B. Nigam
13. Shri N.K. Mehrishi
14. Shri R.C. Gaur
15. Dr. K.C. Sharma
16. Shri O.P. Mittal
17. Dr. P.D. Verma
18. Shri B.N. Gupta
19. Shri A.K. Kulshrestha
20. Shri G.L. Bohra
21. Dr. M.C. Gupta
22. Shri S.M. Murdia
23. Shri R.L. Barajatya
24. Shri Mohan Lal Rawat
25. Dr. N.D. Gautam

The members present considered the proposed syllabus of P.U.C. and Under-graduate classes as contained in the Board of Studies in Mathematics and suggested certain changes. Accordingly the syllabus was revised. No change was suggested for the syllabus for P.U.C. Examination, 1972 except minor corrections of topographical mistakes. The revised syllabus, with the changes suggested incorporated, for First Year Exam. 1972, Second Year Exam. 1973, Third Year TDC Exam. 1974, B.Sc. Hons. Pt. I Exam. 1973 and B.Sc. Honours Pt. II Exam. 1974 is attached herewith vide appendixes II, III, IV, V (a) and V (b).

It was also resolved that the names of books recommended be deleted.

The meeting ended with a vote of thanks to the chair.

(Dr. G. C. Patni)

*Convener*

*B.O.S. in Maths.*



*First Year T.D.C. 1972 (Arts and Science)*

There shall be two papers each of 3 hours duration. In Faculty of Science each paper will carry 75 marks, while in the Faculty of Arts each paper will carry 50 marks. Each question paper shall be divided into two sections and the candidates will be required to attempt at least two questions from each section.

Paper I : Algebra and Coordinate Geometry

Paper II : Calculus and Mechanics.

Paper First

*Section A : Algebra (Sets, Relations, Functions and  
Number System)*

Sets, subsets and their compliments. Union and intersection of a finite number of sets and their properties such as associativity, commutativity, distributivity and Demorgan's law. Venn diagram.

The concept of relation. Equivalence and order relations. Mapping-functions. Injection, surjection and Bijection. Binary relation, Inverse relation and Inverse function.

Natural Numbers, Peano's Axioms, Mathematical induction. Integers defined in terms of natural numbers. Order relation in integers. Prime integers. Residue class modulo positive integers. Rational numbers in terms of integers, and their simple properties.

*Section B : Coordinate Geometry*

Conic Sections (Parabola, ellipse and Hyperbola their equations, diameters, tangents, normals, chord of contacts and polars; asymptotes of a hyperbola and conjugate hyperbola,

(To be treated in rectangular coordinates only).

*First Year TDC*

## Paper Second

*Section A : Calculus*

Concept of limits, functions and their derivatives. Geometrical significance of  $\frac{dy}{dx}$ . Differentiation of simple

algebraic, circular and inverse circular, exponential and logarithmic functions. Derivative of composition of functions. Second order derivative and their application to Mechanics. Tangents and normals.

Integration as anti-derivative. Integration of simple algebraic, circular, exponential and logarithmic functions. Integration by parts and simple cases of integration by substitution and breaking into partial fractions. Simple cases of definite integral and its geometrical interpretation.

*Section B : Mechanics :*

Forces, velocity and acceleration. Their representations as directed line segments, their resolution and composition (Parallelogram Law and triangle law). Lami's theorem. Equilibrium of a body under three forces; parallel forces and moments.

Rectilinear motion under uniform acceleration. Vertical motion under gravity. Newton's Laws of motion. Motion on an inclined plane.

## APPENDIX III

## Second Year T.D.C. Exam., 1973.

There shall be three papers, each of three hours duration. Each paper shall carry 50 marks in Faculty of Science and in Faculty of Arts, the three papers I, II and III shall carry 33, 33 and 34 marks respectively.

## PAPER I

*Algebra*

*Groups* : Definition and simple properties. Subgroups Cyclic subgroups Cosets. Lagrange's theorem on the orders of subgroup. Permutation group. Homomorphism : Isomorphism, endomorphism and automorphism. Cayley's theorem. Normal subgroups and quotient groups.

*Rings* : Integral Domain, characteristics. Residual class (quotient) rings. Ideals, Principal ideals. Principal Ideal domain, Euclidean domain, unique factorisation theorem, and Polynomial rings.

*Fields* : Field of quotients of an integral Domain.

*Matrices and Determinants* : Algebra of Matrices, Determinants upto fourth order and their fundamental properties. Inverse of a matrix. Application to system of linear equations. Equivalent Matrices and Rank of a matrix.

(The scope of the course in Algebra is indicated by chapters 2 and 3 of the book 'Topics in Algebra' by I.N. Herstein excluding sections 2.5, 2.11, 2.12, 3.8, 3.10 and 3.11 1964 Edition).

*Second Year T.D.C.*

## PAPER II

*Calculus*

The paper shall consist of two sections and candidates shall be required to attempt at least two questions from each section.

Section A :—*Differential Calculus* : Functions of the real variable. Limits of a function, continuous Functions, Successive differentiation, Leibniz's Theorem. Roll's Theorem, Mean value

Theorems ( Lagrange's and Cauchy's form ), Taylor's and Maclaurin's Theorems, Taylor's series. Indeterminate forms, Use of L'Hospital's rule. Partial Differentiation; Partial derivatives of a function of several variables and their geometrical interpretation. Euler's Theorem. Differentials; total differentials, approximation by differentials. Derivative of an implicit function. Taylor's Theorem for a function of two variables. Maxima and minima of functions of one or two variables.

Section B :—*Integral Calculus* : Evaluation of Integrals, standard forms; methods of Integration—by substitution, by parts and by partial fractions. Easy reduction Formulae. Definite integral with its properties, Anti-derivatives and the indefinite integral. Fundamental Theorem of integral calculus. Approximation of integrals (Simpson's rule and trapezoidal rule). Applications of integration to areas in rectangular and polar coordinates, the length of a plane curve, volumes and surfaces of solids of revolution. Double and triple integrals (simple cases ).

### PAPER III

#### *Statics and Hydrostatics*

There shall be two sections and candidates shall be required to attempt at least two questions from each section.

Section A :—*Statics* : General conditions of equilibrium of a body under a system of co-planar forces. Friction; centre of gravity; common catenary and virtual work.

Section B :—*Hydrostatics* : Fluid pressure, Pressure on immersed surfaces, centre of pressure. Conditions of equilibrium of floating body.

## APPENDIX IV

*Third Year T.D.C. Exam. 1974*

There shall be three papers each of three hours duration. Each paper shall carry 50 marks in the Faculty of Science and 33, 33 and 34 respectively in Faculty of Arts.

## PAPER I

*Analysis*

Real and complex number system. Finite, countable and uncountable sets. Matrix spaces, compact sets, perfect sets and connected sets. Sequences and series. Continuity. Differentiability and the concept of Riemann integral.

(The scope of the course is indicated by the first six chapters (excluding Stieltjes integral) of 'Principles of Mathematical Analysis' by W. Rudin. (Edition 1964).

## PAPER II

*Analytical Geometry of three dimensions and  
Differential equations.*

There shall be two sections and candidates shall be required to attempt at least two questions from each section.

Section A : *Analytical Geometry of three dimensions* : Planes, straight lines, spheres, cones, cylinders, ellipsoids (standard equations and tangent planes).  
(Treatment by rectangular coordinates only).

Section B : *Differential Equations* : Differential equations of first order and first degree. Bernoulli's equation. Ordinary linear differential equations with constant coefficients. Equations of the first order but not of first degree. Clairaut's equation. Homogeneous linear differential equations with variable coefficients.

## PAPER III

*Vectors and Dynamics*

*Vectors* : Definition : Graphical representation, Algebra of vectors (addition; commutative, associative and

distributive laws). Cross and Dot products of two or three vectors.

*Dynamics* : Velocity and Acceleration (radial and transversal, tangential and Normal). Newton's laws of motion. Rectilinear motion. Relative velocity. Simple Harmonic motion. Hookis Law. Central orbits under inverse square law. Impulse Work and energy. Constrained motion. Projectiles. Direct impact of smooth bodies.

## APPENDIX V (a)

## B.Sc. (Hons.) Pt. I Exam. 1973

There shall be three papers, each of three hours duration. Each paper shall carry 50 marks in Faculty of Science and in Faculty of Arts, the three papers I, II and III shall carry 33, 33 and 34 marks respectively.

## PAPER I

*Algebra*

Same as for B.Sc. Pass Second Year Exam. 1973

and

Finite Dimensional vector spaces. Linear dependence and independence. Basis and Linear Transformations.

## PAPER II

*Calculus*

The paper shall consist of two Sections and candidates shall be required to attempt at least two questions from each section.

Same as for B.Sc. Pass Second Year Exam. 1973

and

Maxima and minima of Several Variables.

## PAPER III

*Statics and Hydrostatics*

There shall be two sections and candidates shall be required to attempt at least two questions from each section.

B.Sc. Honours Pt. I : Paper III contd.

Section A : *Statics* : General conditions of equilibrium of a body under a system of co-planer forces. Friction; centre of gravity common catenary and virtual work.

Section B : *Hydrostatics* : Fluid pressure, Pressure on immersed surfaces; centre of pressure, Conditions of equilibrium of a floating body including metacentric formula, Equilibrium of gaseous liquids (excluding capillarity and oscillation of floating bodies).

## APPENDIX V (b)

B.Sc. (Honours) Pt. II Exam. 1974

There shall be three papers each of three hours duration. Each paper shall carry 50 marks in Faculty of Science and 33, 33 and 34 respectively in Faculty of Arts.

### PAPER I

#### *Analysis*

Real and complex number system. Finite, Countable and countable sets. Metric spaces, compact sets, perfect sets and connected sets. Sequences and series. Continuity. Differentiability and the concept of Riemann integral Uniform convergence.

(The scope of the course is indicated by the first seven chapters (excluding Stieltjes integral) of 'Principles of Mathematical Analysis' by W. Rudin, (Edition 1964).

### PAPER II

Differential eqs.

*Analytical Geometry of three dimensions and Numerical Analysis.*

There shall be three sections and candidates are required to attempt at least one question from each section.

Section A : *Analytical Geometry of three dimensions :*

Planes, straight lines, spheres, cones, cylinders, ellipsoids (standard equations and tangent planes).

(Treatment by rectangular coordinates only)

Section B : *Differential equations :* Differential equations of first order and first degree. Bernoulli's equations. Ordinary linear differential equations with constant coefficients. Equation of the first order but not of first degree. Clairaut's equation. Homogeneous linear differential equations with variable coefficients,



Section C : *Numerical Analysis* : Finite differences, interpolation, extrapolation and inverse interpolation. Solution of difference equations.

### PAPER III

#### *Vectors and Dynamics*

*Vectors* : Definition, Graphical representation, Algebra of vectors (addition; commutative, associative and distributive laws) Cross and Dot products of two or three vectors.

*Dynamics* : Velocity and Acceleration (radial and transversal tangential and Normal). Newton's laws of motion. Rectilinear motion. Hooke's Law. Central orbits under inverse square law. Impulse. Work and energy. Constrained motion. Projectiles. Direct impact of smooth bodies. Motion in resisting medium.

MINUTES OF THE MEETING OF THE  
FACULTY OF ARTS HELD ON 10th  
FEBRUARY, 1971 AT 12·00 NOON  
IN THE HUMANITIES HALL,  
UNIVERSITY CAMPUS,  
JAIPUR.

**Present**

Dr. G.C. Pande, Dean (*In the Chair*).

- |                                    |                               |
|------------------------------------|-------------------------------|
| 2. Shri Ramawtar Vaish             | 3. Shri R.P. Agrawal (Gitai)  |
| 4. Shri Gokul Prakash<br>Sharma    | 5. Shri M.L. Sharma           |
| 6. Shri S.N. Paul                  | 7. Shri Narain Singh<br>Verma |
| 8. Shri B.B. Sharma                | 9. Shri S.C. Tela             |
| 10. Shri Gopal Lal Purohit         | 11. Dr. G.C. Verma            |
| 12. Shri J.S. Harjani              | 13. Shri K.K. Pathak          |
| 14. Shri Bal Gangadhar             | 15. Shri M.L. Sharma          |
| 16. Shri Vasu Dev Arya             | 17. Shri Gulab Singh Sengar   |
| 18. Shri S.S. Dular                | 19. Shri Mahendra Raizada     |
| 20. Shri P.C. Vijayvargia          | 21. Shri D. Vable             |
| 22. Shri K.R. Vable                | 23. Shri V.V. Ramana Murti    |
| 24. Shri H.P. Maheshwari           | 25. Shri N.V. Patwardhan      |
| 26. Shri R.V. Sakhalkar            | 27. Dr. M.M. Lavania          |
| 28. Shri Atal Behari Mathur        | 29. Shri Chand Mal Sharma     |
| 30. Shri B.N. Kashyap              | 31. Shri G.N. Arora           |
| 32. Shri Yoganand Sharma           | 33. Shri G.B. Mathur          |
| 34. Shri Chandra Shekhar<br>Sharma | 35. Shri K.L. Mod             |
| 36. Shri M.L. Vidyarthi            | 37. Dr. Rameshwar Gupta       |

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|-----------------------------|---------------------------------|
| 38. Shri M.K. Pandey        | 39. Shri Devki Nandan<br>Sharma |
| 40. Shri B.C. Shastri       | 41. Shri K.L. Gupta             |
| 42. Dr. Nathu Lal Pathak    | 43. Dr. S.K. Gupta              |
| 44. Dr. T.K.N. Unnithan     | 45. Dr. C.P. Bhambhari          |
| 46. Dr. Sarnam Singh Sharma | 47. Dr. L.P. Saxena             |
| 48. Prof. P.N. Mathur       | 49. Mrs. Rama Kochar            |
| 50. Dr. D.S. Nag            | 51. Dr. S.P. Verma              |
| 52. Shri R.L. Bhatnagar     | 53. Dr. S.B. Verma              |
| 54. Shri C.S. Ojha          | 55. Shri M. Hazela              |
| 56. Shri R.K. Agrawal       | 57. Shri R.S. Bhatnagar         |
| 58. Shri C.B. Agnihotri     | 59. Shri A.K. Kulkshrestha      |
| 60. Shri H.N. Purohit       | 61. Shri Ziauddin Khan          |
| 62. Shri M.G. Dravid        | 63. Shri L.R. Sharma            |
| 64. Dr. (Mrs.) G. Vaish     | 65. Dr. S.N. Gupta              |
| 66. Miss S. Mehra           | 67. Mrs. Santosh Mahey          |
| 68. Shri Chatur Singh Soman | 69. Shri H.S. Verdia            |
| 70. Miss M.B. Sharma        | 71. (Miss) M. Zindal            |
| 72. Shri Jagdish C. Arora   | 73. Shri Subash Chand Jain      |
| 74. Shri N.K. Mehta         | 75. Shri Shyam Lal Sharma       |
| 76. Shri P.K. Chaddha       | 77. Dr. Ram Ahuja               |
| 78. Shri R.S. Tripathi      | 79. Shri S.C. Sogani            |
| 80. Shri R.N. Maheshwari    | 81. Shri Ritu Raj Sharma        |
| 82. Shri O.P. Joshi         | 83. Shri R.S. Mishra            |
| 84. Shri R.K. Mathur        | 85. Dr. R.P. Bhatnagar          |
| 86. Shri M.K. Mehra         | 87. Shri H.S. Saxena            |
| 88. Shri R.N. Chandra       | 89. Shri S.P. Soni              |
| 90. Shri M.P. Srivastava    | 91. Dr. M.P. Roy                |
| 92. Shri Pukhraj Jain       | 93. Shri Hari Prasad Sharma     |
| 94. Shri Jang Bahadur Singh | 95. Dr. L.R. Joshi              |
| 96. Shri H.R. Tiwari        | 97. Shri G.B. Mathur            |
| 98. Shri Bishan Sinha       | 99. Shri Brahmanand Sharma      |

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|----------------------------------|-------------------------------------|
| 100. Dr. M.S. Nigam              | 101. Shri Jashwant Singh            |
| 102. Shri M.M. Sahani            | 103. Shri Ravi Tikku                |
| 104. Shri K.S. Saxena            | 105. Shri T.R. Agrawal              |
| 106. Shri C.L. Mishra            | 107. Shri J.K. Mishra               |
| 108. Shri K.C. Gautam            | 109. Shri M.L. Soni                 |
| 110. Shri G.N. Bhargava          | 111. Miss Sushila Vyas              |
| 112. Dr.(Mrs.)K. Bhandari        | 113. Shri Yash Pal Tyagi            |
| 114. Shri H.C. Jain              | 115. Shri Mathura Prasad<br>Agrawal |
| 116. Shri M.L. Kewalia           | 117. Shri Shiv Nath Singh           |
| 118. Dr. M.A. Zaidi              | 119. Shri Chandra Shekhar<br>Sharma |
| 120. Shri S.L. Doshi             | 121. Shri G.L. Joshi                |
| 122. Shri H.C. Bhat              | 123. Shri Brij Lal Gaur             |
| 124. Shri G.D. Mehta             | 125. Shri S.K. Ojha                 |
| 126. Shri Satya Vrat             | 127. Shri S.P. Jain                 |
| 128. Shri P.N. Saxena            | 129. Shri S.S. Tanwar               |
| 130. Dr. P.D. Verma              | 131. Shri G.N. Chaudhary            |
| 132. Miss K.K. Terway            | 133. Miss H. Prabhu                 |
| 134. Dr. P.S. Chauhan            | 135. Shri M.K. Marwah               |
| 136. Mrs. Kanta Marwah           | 137. Shri Jai Singh Neeraj          |
| 138. Shri N.C. Barua             | 139. Shri Lila Dhar Singh           |
| 140. Shri C.P. Bhatnagar         | 141. Shri R.C.L. Sharma             |
| 142. Shri Shyam Sundar<br>Sharma | 143. Shri Satya Bhanu               |
| 144. Shri Hari.Mohan<br>Sharma   | 145. Shri Radha Govind Sharma       |
| 146. Shri Ganesh Dutt<br>Sharma  | 147. Shri Rajendra Kumar<br>Saxena  |
| 148. Dr. B.R. Luthra             | 149. Shri S.S. Lal Mathur           |
| 150. Mrs. S.J. Andrew            | 151. Shri Pawan Kishore             |
| 152. Dr. R.N. Chaudhary          | 153. Shri B.L. Dashore              |
| 154. Shri Raghuraj Singh         | 155. Shri Behari Lal Tantiya        |

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|------------------------------------|-------------------------------------|
| 156. Shri J.P. Sharma              | 157. Shri R.S. Verma                |
| 158. Shri Budh Lal Thanvi          | 159. Shri J.D. Jain                 |
| 160. Shri A.F. Usmani              | 161. Shri G. Anand                  |
| 162. Shri P.C. Jaiman              | 163. Shri J.C. Mehta                |
| 164. Dr. G.N. Sharma               | 165. Shri P.K. Majumdar             |
| 166. Shri K.K. Sharma              | 167. Shri D.L. Sharma               |
| 168. Shri A.M. Ghosh               | 169. Shri K.L. Goswami              |
| 170. Dr. Mahavir Dadheech          | 171. Shri S.N. Dube                 |
| 172. Dr. K.C. Sharma               | 173. Dr. M.C. Gupta                 |
| 174. Dr. Iqbal Narain              | 175. Dr. Banwari Lal Sharma         |
| 176. Shri N.L. Shukla              | 177. Shri Bhagwan Singh             |
| 178. Shri J.S. Mehta               | 179. Mrs. Kamesh Mathur             |
| 180. Mrs. Kusum Narain             | 181. Mrs. Santosh S.Kulshrestha     |
| 182. Shri Sunder Lal Sharma        | 183. Shri Jagdish Prasad<br>Kaushik |
| 184. Dr. Shiv Shroop Sharma        | 185. Shri S.T.H. Zaidi              |
| 186. Shri Sachchidanand<br>Pande   | 187. Dr. J.L. Banerjee              |
| 188. Shri Satish Chandra<br>Dev    | 189. Dr. L.N. Upadhyay              |
| 190. Shri R.C. Mittal              | 191. Shri R.C. Gaur                 |
| 192. Dr. G.C. Tyagi                | 193. Shri Vijay Kumar               |
| 194. Shri Yajnavalkya<br>Sharma    | 195. Dr. Naresh Chand Pathak        |
| 196. Dr. R.C. Mahendra             | 197. Shri Dev Dutt Kulhari          |
| 198. Shri Anoop Singh<br>Panwar    | 199. Shri G.L. Bohara               |
| 200. Shri B.B. Nigam               | 201. Shri Y.D. Sharma               |
| 202. Shri B.L. Parekh              | 203. Shri Mohd. Mohsin Khan         |
| 204. Shri Darshan Singh<br>Khurana | 205. Shri Mazhar Ali                |
| 206. Shri G.K. Gupta               | 207. Shri S.M. Murdia               |
| 208. Shri B.P. Bhargava            | 209. Shri Mohiuddin                 |
| 210. Shri Kashmiri Lal<br>Midha    | 211. Shri Om Prakash Sharma         |

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|------------------------------------|------------------------------------|
| 212. Shri R.P. Srivastava          | 213. Shri Yatish Sharma            |
| 214. Mrs. Indra Shathar            | 215. Dr.(Mrs.) Kamla Gangwala      |
| 216. Mrs. Suman Lata<br>Saxena     | 217. Miss Raj Rani Jaj             |
| 218. Mrs. Indra Tripathi           | 219. Shri D.C. Bhanawat            |
| 220. Shri Govind Rao<br>Rajurkar   | 221. Shri H.L. Sharma              |
| 222. Shri B.B. Kaushik             | 223. Shri G.D. Solanki             |
| 224. Shri Gulzari Lal Jain         | 225. Sister Jovita                 |
| 226. Sister Carmen                 | 227. Dr. Kanhaiya Lal Sharma       |
| 228. Shri Yogesh Chandra<br>Sharma | 229. Miss M. Bhatji                |
| 230. Miss Prem Gupta               | 231. Shri B.L. Sharma              |
| 232. Shri Rati Kant<br>Chaudhary   | 233. Shri Tola Ram Sharma          |
| 234. Shri Ramesh Chandra<br>Verma  | 235. Dr. Indra Pal                 |
| 236. Shri D.C. Shastri             | 237. Shri S.K. Tewari              |
| 238. Shri B.M. Diwakar             | 239. Shri S.F. Malvea              |
| 240. Shri T.N. Gupta               | 241. Dr. G.C. Patni                |
| 242. Dr. N. Sahal                  | 243. Dr. Rajendra Prasad<br>Sharma |
| 244. Dr. G.R. Parihar              | 245. Shri B.S. Srivastava          |
| 246. Shri A.K. Shukla              | 247. Shri M.P. Garg                |
| 248. Mrs. C.J. Bhardwaj            | 249. Mrs. Yashoda Mishra           |
| 250. Mrs. Shanta Garg              | 251. Shri B.L. Sharma              |
| 252. Shri S.S. Sondhi              | 253. Shri Prakash Acharya          |
| 254. Shri Manak Chand<br>Bhagat    | 255. Dr. M.N. Nigam                |
| 256. Shri O.P. Mittal              | 257. Dr. Daya Krishna              |
| 258. Dr. Raj Krishna               | 259. Dr. B.D. Tikkiwal             |
| 260. Dr. V.N. Upadhyaya            | 261. Dr. D.D. Narula               |
| 262. Dr. M.S. Jain                 | 263. Dr. Kashi Prasad              |

Shri J.N. Mathur, Dy. Registrar.

Before proceeding with the business on the agenda the Faculty expressed its sense of deep sorrow on the sad demise of Dr. K.M. Munshi and observed two minutes silence (all members standing) to pay homage to the departed soul.

1. The minutes of the meeting of the Faculty of Arts held on 3rd and 4th February, 1970 were *confirmed*.

Arising out of the above the Faculty *resolved* to recommend that the proviso occurring in O.215-I (in respect of the eligibility of a candidate for admission to the Diploma Course in Sanskrit (*beginning with the words—'Provided that a foreign student's and ending with the words—'Without passing the First Year Examination'* be deleted.

2. The Faculty *appointed* the following members (Internal) in the casual vacancies on the Boards of Studies as noted against each :

- (1) Shri L.R. Sharma,  
Head of the Post-graduate  
Department of English, Board of Studies  
Government College, AJMER, in English  
(vice Shri M.L. Sahal-Retd).
- (2) Dr. L.R. Joshi, Board of Studies  
Head of the Department of in Philosophy.  
Philosophy, Govt. College,  
KOTA.  
(vice Miss K. Kumedan-ceased)
- (3) Dr. N.C. Pathak,  
Head of the Department of Board of Studies  
Sanskrit, S.D. Govt. College, in Sanskrit  
BEAWAR.  
(vice Shri P.C. Jain-Retd.)
- (4) Dr. K.L. Sharma,  
Head of the Post-graduate Board of Studies  
Department of Hindi, in Hindi.

Dungar College, Bikaner.  
(Vice Dr. G.S. Satyendra—  
ceased)

- (5) Dr. (Mrs.) Kamla Bhandari,  
Principal & Head of the  
Department of Hindi,  
M.S. College for Women,  
BIKANER. (vice Dr. Mrs. S.  
Lata Agarwal-Retd.)  
Board of Studies  
in Hindi.
- (6) Shri D.N. Sharma,  
Head of the Post-graduate  
Department of Drawing &  
Painting, B.V. College of  
Arts & Science,  
BANASTHALI.  
Board of Studies  
in Drawing &  
Painting.

3. With reference to the Academic Council Resolution No. 11 (iv) dated 22nd March, 1969 referring back the recommendation No. 6 of the Board of Studies in Music (dated 12-9-1968) and of the Faculty of Arts (No. 9 dated 3-2-1970) for re-consideration, the Faculty considered recommendation No. 8 dated 23-10-1970 of the Board of Studies in Music reiterating its earlier recommendation to the effect that B.A Honours course in Music be instituted in the University.

*Resolved that* the earlier recommendation of the Board and the Faculty be reiterated and the Academic Council be requested to give reasons when it refers back any proposal for re-consideration.

4. With reference to its Res. No. 34 (v) dated the 4th February, 1970 under which the recommendation No. 3 dated 8-9-1968 of the Board of Studies in Sanskrit for making the knowledge of Sanskrit compulsory for those studying Indian Languages, Ancient Indian History, Indian Philosophy or Ancient Indian Political Thought and Institutions for the M.A. Examination was referred to the Boards of Studies in Hindi, History, Philosophy and Political Science for recon-



sideration, the Faculty considered the recommendations of the aforesaid Boards of Studies as contained in their resolutions noted below :

<i>Name of the Board</i>	<i>Res. No.</i>	<i>Summary</i>
Political Science	10	The Board did not accept it in the case of Political Science.
Hindi	7	The Board observed that there is already a provision of Sanskrit as optional subject under M. A. Paper VII b (Basic Languages).
History	10	The Board does not think necessary to make the study of Sanskrit compulsory for the student of History.
Philosophy & Psychology.	9	The Board did not consider it desirable to make the knowledge of Sanskrit compulsory for every student of Philosophy. However, those who do research in Indian Philosophy should know Sanskrit.

*Resolved that the aforesaid observations/recommendations of the Boards be recorded.*

5. With reference to the Faculty of Arts Res. No. 17 dated the 3rd February, 1970 and Academic Council Res No. 5 (viii) dated 21-4-1970 agreeing in principle to the introduction of a Diploma Course in Public Administration, the Faculty considered the amendments to the relevant Statutes/ Ordinances and regulations suggested by the Board of Studies in Public Administration vide its Resolution No. 6 dated 14-9-1970 for instituting the aforesaid Diploma Course.

*Resolved to recommend* that the amendments to the Statutes/Ordinances/Regulations together with the syllabus suggested by the Board of Studies in Public Administration for the proposed Diploma Course in Public Administration be accepted, and the proposed ordinances be suitably numbered.

6. The Faculty considered the following recommendation No. 12 dated 23-10-1970 of the Board of Studies in Music :

“12-With reference to Res. No. 7 dated 12-9-1968 of Studies in Music, the Board re-considered the proposal of Shri B.R. Deodhar for recognising the B.Mus. and M.Mus.degrees of Banaras Hindu University, Varanasi and M.S. University, Baroda for employment of lecturers in Music at grauate and Post-graduate level, together with a letter dated 20-12-1969 of the Convener, Board of Studles (to whom a reference was made in view of the above mentioned resolution).

The Bord decided that the degrees of Banaras Hindu University, Varanasi and M.S. University, Baroda may be considered to be equivalent to our degree as both of these are constituted Universitiee and they have very good stanning in the field of Music also.”

*Resoleed that* the aforesaid recommendation of the Board be *referred* to the Equivalence Committee.

7. The Faculty considered recommendation No. 7 dated 16-9-1970 of the Board of Studies in Drawing & Painting to the effect that in order to raise the standard of the subject a separate Faculty of Fine Arts may be created.

*Resolved that* a Committee consisting of the following members be appointed to suggest ways and means for improving and diversifying the teaching of Fine Arts :

(1) Prof. Daya Krishna (Convener)

(2) Convener, Board of Studies in Music

- (3) Convener, Board of Studies in Drawing & Painting.
- (4) Dr. R.N. Choudhary, Principal,  
S.D. Govt. College, Beawar.
- (5) Dr. Rameshwar Gupta, Head of the Department of  
English, B.V. College of Arts & Science, Banasthali.

8. The Faculty considered the following recommendation No. 13 dated 23-10-1970 of the Board of Studies in Music.

“13 The Board considered letter No. 1035/RU/Pass/2225 dated 20-8-1968 from the Registrar, Prayag Sangeet Samiti, Allahabad to recognise the following examinations conducted by the Prayag Sangeet Samiti, Allahabad as equivalent to the corresponding examination of this University.

- (1) Sangeet —For appointment as a Lecturer in  
Praveen graduate classes.
- (2) Sangeet —For appointment as a Lecturer in  
Acharya Post-graduate classes.

The Board considered the standing of the Institution, courses of study prepared for the examination and the duration fixed for completing these courses and *resolved* that the Sangeet Praveen degree of the Prayag Sangeet Samiti may be considered to be a suitable qualification for the purpose of employment as Lecturers. This degree may be regarded as equivalent to M.A. Music.”

*Resolved that* the aforesaid recommendation of the Board be referred to the Equivalence Committee.

9. The Faculty considered recommendation of the Board of Studies in Public Administration as contained in its Res. No. 10 dated 14-9-1970 regarding the system of re-examination introduced by the University w.e.f. the examinations of 1970.

*Resolved that* the recommendation of the Board be noted and recorded.

10. The Faculty considered recommendation made by the Board of Studies in Philosophy and Psychology as contained in its resolution No. 11 dated the 16th and 17th September, 1970, and *resolved to recommend* that the following change be made in the Note on page cvi of the 1970 edition of the B.A. (Pass and Honours) syllabus.

“*Substitute*—‘The paper offered shall be of the Honours standard’ for—‘The paper shall be offered at the Final Year T.D.C. level.’

(11) The Faculty considered the *following* proposals of Dr. S.K. Chatterjee, President, Sahitya Academy, 16, Hindustan Park, Calcutta-29 forwarded by the Secretary, National Academy of Letters, Ravindra Bhawan, New Delhi together with the observations of the Board of Studies in Hindi and English as contained in their resolutions No. 10 and 11 dated the 30th September, 1970 and 23rd October, 1970 respectively and the observations of the Convener, Board of Studies in Sanskrit as contained in his letter No. 3 dated 3-7-1970.

- (1) A course in comparative Indian Literature be provided at Honours and Post-graduate levels in all Indian Universities, and
- (2) Literature courses at Honours and Post-graduate levels in all Indian Universities should provide as part and parcel of the syllabus, study of translations in the candidates mother tongue of such Indian classics as are originally written in Languages other than his own.

The Faculty generally endorsed both the proposals of Dr. Chatterjee and *resolved that* (i) the Academic Council be requested to consider the proposal No. 1 above and (ii) Boards of Studies in Hindi, English and Sanskrit be again asked to consider proposal No. 2 in the light of the discussions in the Faculty.

12. The Faculty considered Res. No. 10 dated 19-9-1970 of the Board of Studies in Geography to the effect that at

least two periods per week per student be provided for guiding Dissertation work.

*Resolved that status quo be maintained.*

13. The Faculty considered Res. No. 4 dated 19-9-1970 of the Committee of Courses in Modern European Languages to the effect that a person holding the B.A. (Hons.) Degree in Russian Language and Literature of the Institute of Russian Studies, New Delhi be treated qualified for teaching Certificate/Diploma Courses in Russian Language.

In this connection the Faculty was informed that according to the information received from the Union Ministry of Education & Youth Services and the Institute of Russian Studies, New Delhi the aforesaid B.A. (Hons.) Degree was awarded on successful completion of four year course in the Language and such degree holders were considered competent enough to teach the Certificate/Diploma courses.

*Resolved that consideration be postponed and meanwhile information be obtained from the Institute of Russian Studies, New Delhi about the minimum qualifications required of a candidate admitted to the aforesaid B.A. (Hons.) degree course in Russian Language.*

14. With reference to its Resolution No. 19 dated 3-2-1971 under which it had accepted in principle recommendation No. 7 dated 17-12-1969 of the Committee of Courses in Modern European Languages for introduction of Post-Diploma Courses in Modern European Languages, the Faculty considered recommendation No. 5 of the Committee of Courses in Modern European Languages made at its meeting held on 19-9-1970 suggesting additions and alterations to the Statutes/Ordinances/Regulations of the Univ. Hand Book Pt. II for the proposed Post-Diploma Course.

In this connection, it was reported to the Faculty that the Academic Council vide its Resolution No. 5 (ix) dated 22-4-1970 had not accepted the aforesaid recommendations.

*Resolved to recommend again* that the aforesaid Post-Diploma Course be introduced and the additions/alterations suggested by the Committee be accepted. The Academic Council be also requested to let the Faculty know of its reasons if it did not accept the proposal.

15. The Faculty considered recommendation No. 12 dated 23-10-1970 of the Board of Studies in English to the effect that subject to teaching facilities being available, remedial teaching in English should be given in the II and III Year T.D.C. classes to those who could not pass in the compulsory General English Paper prescribed for the First Year T.D.C. examination.

*Resolved that* the aforesaid recommendation of the Board be recorded.

16. With reference to the Academic Council resolution No. 35 dated 21-4-1970 to the effect that in the interest of raising standards of teaching and examinations and award of degrees, the Board of Studies may prepare alternative schemes of courses and examinations, the Faculty considered the recommendations of the various Boards of Studies as contained in their resolutions given below :

<i>Name of the Board</i>	<i>Res. No.</i>
Drawing & Painting	7
Political Science	7
Sanskrit	7
Urdu	7
Music	7
Public Administration	9
Philosophy	6
Hindi	6
Home Science	6
English	6
Modern European Languages	7
Geography	6

Statistics	8 & 9
Mathematics	7
History	7
Economics	7

The Faculty observed from a perusal of the above resolutions that alternative courses at the post-graduate level had been suggested by the Board of Studies in History and the Board of Studies in Philosophy & Psychology had recommended full and part courses, but no Board had recommended any alternative scheme of examination.

*Resolved to recommend* that (i) the recommendations of the Boards of Studies in (a) History and (b) Philosophy & Psychology regarding courses be accepted and (ii) the observations of other Boards of Studies be noted.

17. It was reported to the Faculty that the following suggestions made by the Vice-Chancellor in consultation with the Convener of the Examination Reforms Committee were placed before the various Boards of Studies for their consideration :—

- A. Regarding award of Sessional marks, these may be awarded on the basis of Articulation, comprehension and Objective Tests of the students as per details given below :—

*Articulation—4 marks*

Each student may be required to write atleast one essay on the subjects each term, This may be assessed by 2 independent teachers independently and marks recorded. Marks may be declared publicly and if any student feels aggrieved he may be explained why that particular award was given.

*Comprehension—3 marks*

A test may be conducted each term to examine whether the students have picked

up the appropriate expression, and have understood the subject matter.

*Objective Test*—3 marks

Under this category marking may be done but the marks may not be shown to the candidate. But the solution may be written by the teacher and posted on the notice board so that the students may know the correct answers. If this rational basis is adopted there is a chance of increasing the quantum of internal assessment.

B. As regards syllabus at the Post-graduate level I suggest that :—

- (i) a list of full and half courses may be prepared according to the availability of teaching competence.
- (ii) it may be possible for a student to offer two full courses as a topic to give specialisation in that topic. Such a student would prepare himself for research in this topic.
- (iii) a student who wishes to learn the subject for becoming a teacher may offer 4 half courses covering a variety of topics to have an extensive view of the subject. In fact the students may have to choose one full and two half courses.

C. For very few bright students it may be suggested that they may be encouraged to do some self-study on pre-assigned topics which are not included in their curriculum and they may be assessed entirely on that as far as sessional marks are concerned.

In this connection the faculty considered the recommendation made by the various Boards of Studies as contained in their resolutions noted below :



<i>Name of the Board</i>	<i>Resolution No.</i>
Drawing & Painting	5
Political Science	6
Sanskrit	6
Urdu	6
Music	6
Public Administration	8
Philosophy	5
History	6
Hindi	5
Home Science	5
English	5
Modern European Languages	6
Geography	5
Mathematics	6
Statistics	8
Economics	6

*Resolved that status—quo be maintained*

18. With reference to the Academic Council Res. No. 14 dated 21.4.1970 accepting the recommendations of a Committee appointed by the Vice-Chancellor under the conveyance of Dr. Satish Chandra for examining the recommendations made by a Committee of the University Grants Commission to visit the non-professional affiliated colleges, the Faculty considered for further necessary action the recommendation of the aforesaid Committee to the effect that the University Courses should be reorganised to make them more functional.

*Resolved that the recommendation be noted.*

19. The Faculty considered the following proposal of the staff Committee of the University Department of Hindi, forwarded by the Head of Department of Hindi

vide his letter No. 4815 dated 1st Feb., 1971 :

सर्व सम्मति से निश्चय किया गया कि त्रिवर्षीय पाठ्यक्रम के प्रथम वर्ष में अनिवार्य हिन्दी परीक्षा उत्तीर्ण करने के लिए केवल दो ही अवसर प्रदान किए जाएं तथा श्रेणी निर्धारण के लिए अनिवार्य हिन्दी के अंक जोड़े जाएं। साथ ही यह भी निश्चय किया कि द्वितीय एवं तृतीय वर्ष में भी हिन्दी अथवा अंग्रेजी में से एक भाषा अनिवार्य हो, जिससे विद्यार्थियों को अभिव्यक्ति के लिए एक सशक्त माध्यम मिल सके।

Shri K.L. Goswami moved and Dr. Som Nath Gupta seconded the following amendment to the aforesaid proposal :

“कला संकाय की यह बैठक डा० सरनाम सिंह के प्रस्ताव पर इस समय निर्णय न लेकर हिन्दी/अंग्रेजी के स्नातक स्तर के तीनों वर्षों में अध्ययन पर एक समिति को नियुक्त करने का निर्णय करती है तथा चाहती है कि इस समिति में अंग्रेजी तथा हिन्दी के दो दो अध्यापक तथा सामाजिक विज्ञानों, प्रकृति विज्ञानों, तथा वाणिज्य के एक एक अध्यापक शामिल किये जाय। यह समिति इस प्रस्ताव पर विचार कर कला संकाय को अपने विचारों की सूचना दे।”

*Resolved to recommend* that the proposal as amended above be accepted, and the Academic Council be requested to appoint a Committee as suggested in the amendment.

23. The Faculty considered recommendation No. 1 of the Board of Studies in Philosophy made at its meeting held on 16/17th Sept., 1970 to the effect that there should be a separate Board of Studies in Psychology.

*Resolved to recommend* that the aforesaid recommendation of the Board be accepted and consequently, a provision be made in 0-52 of the University Hand Book Pt. II for having two separate Boards of Studies in (i) Philosophy (ii) Psychology.

21. The Faculty considered the recommendations made by the following Boards of Studies/Committees of courses at their meetings held in September/October, 1970 regarding the courses of study and Text-Books together with the additions and/or alterations in the Ordinances and Regulations for the various Examinations in the Faculty viz., M.A. Previous Examination 1972 and and Final Examination 1973; Pre-University Examination of 1972; First Year Examination of 1972, Second Year Examination of 1973 and Final Year Examination of 1974 of the T.D.C. Scheme; B.A. (Hons.) Pt. I Examination of 1973 and Part II Examination of 1974; Post M.A. Diploma Course in International Affairs of 1972; Post M.A. Diploma Course in Indian Government and Politics of 1972; Post M.A. Diploma Course in Textual Criticism (Hindi) of 1972; Post M.A. Diploma in Linguistics (Hindi and English) of 1972, Post—M.A. Diploma Course in Folkloristics (Hindi) of 1972 and Diploma Course in Indian Culture of 1972 as given in their resolutions noted against each :

<i>Name of the Board</i>	<i>Res. No.</i>	<i>Vide Appendix.</i>
Drawing & Painting	4,8,9 & 10	I
Political Science	4,8 & 9	II
Sanskrit	4	III
Urdu, Pesian and Arabic	4	IV
Sociology	4	V
Music	4	VI
History	4	VII
Public Administration	7	VIII
Philosophy & Psychology	4&10	IX
Home Science	3,4&6	X
English	4	XI
Hindi		XII of meeting dated 30.9.1970

XIII of meeting  
dated 27/28.1.1971

Modern European Languages.	3&6	XIV
Geography	4&13	XV
Economics		XVI of recommendations dated 5.12.1970.
Mathematics	4&5 )	) with Faculty of Science.
Statistics	8 )	

The Faculty also considered the recommendations dated 8.2.1971 of the Committee appointed by the Board of Studies Sociology at its meeting held on 28.9.1970 (Vide Appendix--XVII).

In connection with the aforesaid recommendations of the Boards, The following orders passed by the Vice-Chancellor were reported to the Faculty :

- ( i ) Orderes dated 17.12.1970 accepting the recommendation No. 10 of the Board of Studies in Philosophy and Phychology for the examinations of 1971, and
- (ii) Orders dated 7.12.1970 approving the changes in practicals in experimental Psychology for the M.A. Final Examination of 1971.

*Resolved to recommend* that the aforesaid recommendations of the Board of Studies/Committees of Courses be accepted with the following modifications/observations :

- (i)TheConvener,Board of Studies in Political Science be *authorised* to place before the Academic Council direct, the syllabus for (a) Paper II— 'International Politics since 1945.....' for the Post M.A.Diploma in International Affairs examination of 1972 and (b) Paper I, II and III

of the Post-M.A. Diploma in Indian Government and Politics Examination of 1972.

(II) *Ref. Recommendations of the Board of Studies in Sanskrit :*

(a) *Substitute* :—"सुदाम्नः चरितम् और अनन्तवर्ग चरितम्  
In place "भारत दुर्दशा"

(b) *Delcte* the following from the minutes.

"P. 325 Paper II after Yaska's Nirukta delte  
Daivata Kanda".

(c) *Substitute*—"P.326 Paper III—Among Books  
prescribed add-Brihaddevate:first two chapters"  
for 'P.326 Paper III—Among Books prescribed  
and-3. Yaska's Niruka : Daivata Kanda.

(III) *Ref. Recommendations of the Board of Studies in Music :*

The recommendation regarding dropping Thats from the practical of Vocal Music for the First Year T.D.C. (Arts) examination 1972 be *referred* back to the Board of Studies in Music for re-consideration as it was pointed out by some members that the study of Thats should not be dropped.

(IV) *Ref. Recommendations of the Board of Studies in History :*

(a) *Substitute*—"History of Europe—1453-1789"  
for 'History of Europe—1453-1950' in Paper(c).

(b) *Substitute* 'European History (1870-1917) for  
'European History (1870-1919)' in *Paper II (b)*

*(V) Ref. Recommendations of the Board of Studies in Philosophy & Psychology :*

The Convener pointed out certain omissions and printing errors in the minutes and the Faculty *authorised* him to send the corrections to the University Office which may be taken as approved.

*(VI) Ref. Recommendations of the Board of Studies in English :*

(a) The book—"A Practical courses in English by I.K. Sharma and V.D. Singh Publishing House, Jaipur" be added in the list of books recommended for Language and Usage part of the General English Paper for B.A./B.Sc.,B.Com. First Year Examination of 1972.

(b) The book-'The Guide by R.K. Narayan' prescribed for First Year T.D.C. English Literature be retained and the book-'Goldsmith: The Viker of Wakefield' be added as an alternative to the former. Both of them will be for non-detailed study.

(c) The existing syllabus of Paper I for M.A. Previous as printed on page 274 of 1970 edition of the syllabus should also continue and the candidates be allowed the option of offering this paper as per existing syllabus or according to the new syllabus now recommended by the Board. .

(d) The following books be added as the books recommended for the new syllabus of Paper I for M.A. Previous examination :

1. A Description of English—A.E. Darbyshire (Edward Arnold).

2. Language and Linguistics—J.F. Wallwork (Heinemann).
  3. An Introduction to the Pronunciation of English—A.C. Gimson (Edward Arnold).
  4. The Linguistic Science and Language Teaching—M.A.K. Halliday *et al* (Longmans)
  5. A Hand Book of English Grammar—R.W. Zandvoort (Longmans).
  6. A Guide to Patterns and Usage in English—A.S. Hornby (E.L.B.S.)
  7. Modern English Structure—Barbara Strang (Edward Arnold).
  8. English at Home—W.R. Lee (E.L.B.S.)
  9. The Use of English—F.T. Wood (Macmillan)
  10. A Short Guide to English Style—A.A. Warner (E.L.B.S.)
  11. A linguistic Guide to English Poetry—Geoffrey N. Leech (Longmans).
  12. Investigating English Style—David Crystal and Derek Davy (Longmans)
  13. English Grammar—F.S. Scott *et al* (Heinemann).
- (e) The Board of Studies in English be requested to recommend qualifications of teachers for Post M.A. Diploma Course in Linguistics (English) before the teaching of the subject is started.

VII *Ref : Recommendations of the Board of Studies in Hindi.*

*Add—*‘(5) Phetoric (Alankar)’ as given at page 60 in the 1970 edition of the Syllabus.

The Faculty clarified that the books entitled—  
(1) हिन्दी काव्य (2) काव्य प्रदीप and (3) काव्यांग  
परिचय are for Paper I of Second Year  
T.D.C. and the remaining two Reference Books  
are for the Paper II. These adjustments be  
suitably made while compiling the syllabus.

The Heading “सहायक पुस्तक”  
be added above the book entitled—  
“आधुनिक हिन्दी साहित्य के विकास की रूपरेखा”

*Substitute* the book entitled—  
“हिन्दी कहानियाँ : डा. कृष्ण लाल for the book” कथा  
आयाम

*Delete*—“संक्षिप्त” occurring after” जहाज का पंछी.

Add the following books as “Reference  
Book” for Paper III)

- (1) मीरा की प्रेम साधना—भुवनेश्वर प्रसाद मिश्र
- (2) मीरा जीवन और काव्य—सुधाकर पाण्डेय
- (3) विद्यापति युग और साहित्य— डा. अरविन्द नारायण  
सिन्हा
- (4) मुक्तक काव्य परम्परा और विहारी डा. राम सागर  
त्रिपाठी
- (5) विहारी की वाग्बिभूति—विश्वनाथ प्रसाद मिश्र

*Add*—“संस्कृत रचनानुवाद कौमुदी :”  
by Dr. Kapil Deo just below the book  
“संस्कृत व्याकरण प्रवेशिका : बाबू राम सक्सेना”



*Add*—"पाली साहित्य का इतिहास"

by Bharat Singh Upadhyaya just below the book

"ए मैनुअल आफ पालि—सी बी. जोशी"

*Deleted*—"केशव—एक अव्ययन"

by Dr. Sarnam Singh Sharma", as desired by him in the meeting.

The name of the author for the book

"प्रेम चन्द पूर्व हिन्दी उपन्यास"

be corrected as Dr. Kailash Prakash.

Delete "संक्षिप्त" occurring after the book entitled—"दिव्य".

- (j) The Faculty did *not* accept the recommendations of the Board made in some cases for reducing the prices of the Books quoted by the Publishers.

#### VIII Ref : Recommendations of the Board of Studies in Geography :

*Page 215 of the 1970 edition of the syllabus :*

Item (vi) Geographical maps diagrams—*add*—computation of primary data—preparation of frequency tables, representation of data by Histograms and Ogives. Finding Skewness. Computation of Mean, Median and Modes. Deviations—standard Deviations and Mean Deviations and Finding out of correlations. All these deviations be computed from the data collected during the weeks camp.

#### IX Ref : Recommendations of the Board of Studies in Economics :

The recommendation of the Board of Studies in Economics be accepted for the courses of study to

be introduced from July, 1971, but no changes be made in the previous editions of the syllabus.

- X The courses of study in the subjects of Mathematics and Statistics be the same as recommended by the Faculty of Science.

*Resolved further to recommend* that the orders of the Vice-Chancellor referred to above be confirmed.

The meeting ended at 6 p.m. with a vote of thanks to the Chair.

Sd/-G.C. Pande.

*Dean.*

## APPENDIX I

*Ref. Faculty of Arts Res. No. 21 of 10-2-71)*

MINUTES OF THE MEETING OF THE BOARD  
OF STUDIES IN DRAWING & PAINTING  
HELD ON 16TH SEPT. 1970 AT 12  
NOON, AT THE UNIVERSITY  
OFFICE, JAIPUR.

## Present

1. Shri R.P. Shukla
2. Shri O.P. Agrawal
3. Shri S.S. Sharma
4. Shri Moni Sanyal
5. Shri R.V. Sakhalkar (Convener)

1. Under Section 34 (4) (iv) of the University Act, the Board elected Shri Moni Sanyal as a member other than the Convener of the Board of Studies to serve on the Committee for the Selection of examiners in the subject for the year 1971.

2. The Board did not offer any comments, on question papers set for the examination of 1970. Examination Reports were not circulated to the members in advance.

3. The Board scrutinised the statement of qualifications and teaching experience etc. of teachers (received from University Teaching Departments, University Colleges, affiliated institutions and other Universities) for inclusion in the revised panel of examiners for 1971 and revised the panel accordingly. Applicant's name was added. Some new names and old names were excluded and panel revised.

4. The Board recommended courses of Study and text books in Drawing and Painting for the following examinations :—

- |   |   |           |
|---|---|-----------|
| 1. Pre-University Examination, 1972.                                  | } | No change |
| 2 . B.A. pass First Year Exam. of 1972.                               |   |           |
| 3. B.A. (Pass) Second Year Exam. of<br>1973                           |   |           |
| 4. B.A. (Pass) Final Year Exam. of 1974                               |   |           |
| M.A. Prev. and/or Final Examination<br>of 1972 and 1973 respectively. |   |           |

The following books may be recommended for IIInd Yr. T.D.C. (Arts).

भारती चित्रकला का इतिहास, ऊ. व. वर्मा, कला के प्राण बुद्ध,  
जगदीश चन्द्र

5. The Board considered the suggestions of the Vice-Chancellor made by him in consultations with the Convener of the Examination Reforms Committee—

- A. Regarding award of Sessional marks, these may be awarded on the basis of Articulation, Comprehension and Objective Tests of the students as per details given below :—

*Articulation—4 marks.*

Each student may be required to write at least one essay on subject each term. This may be assessed by 2 independent teachers independently and marks recorded. Marks may be declared publicly and if any student feels aggrieved he may be explained what that particular award given.

*Comprehension—3 marks.*

A test may be conducted each term to examine whether the students have picked up the appropriate expression, and have understood the subject matter.

*Objective test—3 marks*

Under this category marking may be done but the marks may not be shown to the candidate. But the solution may be written

by the teacher and posted on the notice board so that the students may know the correct answers. If this rational basis is adopted there is a chance of increasing the quantum of internal assessment.

B. As regards syllabus at the post-graduate level it is suggested that—

- (i) a list of full and half courses may be prepared according to the availability of teaching competence.
- (ii) it may be possible for a student to offer two *full courses as a topic to give specialisation in that topic*. Such a student would prepare himself for research in this topic.
- (iii) a student who wishes to learn the subject for becoming a teacher, he may offer 4 half courses covering a variety of topics to have an extensive view of the subject. In fact the students may have to those one full and two half courses. Not applicable to practical subjects like Drawing and Painting.

C. For very few bright students it may be suggested that they may be encouraged to do some self-study on pre-assigned topic which are not included in their curriculum and they may be assessed entirely on that as far as sessional marks are concerned.

Resolved to recommend that (i).....suggestion 'A' of the learned Vice-Chancellor be accepted, (ii) Suggestion 'B' is not applicable to practical subject like Drawing and Painting, and (iii) Suggestion 'C' be accepted.

6 It was reported that Academic Council, vide its Res. No. 35 dated 21-7-70 accepted the following draft resolution prepared by Dr. Dayakrishna, Chairman, Examination Reforms Committee vide his letter No. Acd/c/1082 dated 17-4-70 as a result of discussions in the meeting of the Examination Reforms Committee held on 17th April, 1970 :—

“Resolved that in the interest of raising standards of teaching and examination and award of degree the

Board of Studies may prepare alternative Schemes of courses and Examinations in their respective subjects to be implemented as early as possible."

7. With reference to the Academic Council Res. No. 35 dated 21-4-70 the Board considered the suggestion of Dr. Daya Krishna regarding alternative Courses and *resolved to recommend that* the Courses should remain as they are existing. The members agreed that to raise the standard of the subject a separate Faculty of Fine Arts may be created.

8. It was reported that the Faculty of Arts passed the following Res. No. 34 (iii) dated the 4th February, 1970 on the courses of study for M.A. Previous Examinations and Final Examination recommended by the Board at its last meeting :—

(III) The courses of study in Drawing & Painting for the M.A. Previous and Final Examinations be referred back to the Board for re-consideration as the Faculty was of the opinion that it would be infeasible to have so many Practical papers as suggested by the Board, and in the meanwhile the existing courses of study for the M.A. Previous and Final Examinations be repeated.

*Resolved that* the existing courses be continued.

9. The Board considered a complaint dated 7-4-1970 received from Shri C.B. Mehta, Lecturer in Drawing, Kanoria Mahila Mahavidyalaya Jaipur against the question paper I ( Advanced design ) of First Year T. D. C. along with the remarks of the paper setter to whom a reference was made.

*Resolved to recommend that* the word 'Poster Colour' should be substituted in place of 'Tempra' in the syllabus to avoid ambiguity. The Board further resolved that the examiner of Ist Year T.D.C. Arts Part (A) Paper I should have consulted the syllabus and should have used the same words as mentioned in the syllabus. The Language of his letter appeared highly objectionable to the members.

10. The Board considered the letter received from Shri Raja Ram, Internal Examiner and Lecturer in Drawing, B.V. College of Arts & Science, Banasthali, pointing out the mistakes committed in the question papers of Drawing at the

various University Examinations of 1970 and making some suggestions.

The Board was of the opinion that most of Shri Raja Ram's suggestions were non-feasible except the following one :—

“It was agreed that III Year T.D.C. Arts Paper I study from life (bust) in all should be spread over two days with three hours duration on each day during the same hours :

**Sd/-R.V. Shakhalkar**

*Convener*

## APPENDIX II

*(Ref. Faculty of Arts Res. No. 21 dated 10-2-71)*

Minutes of the Meeting of the Board of Studies in Political Science held on 16.9.1970 at 12 noon, at the University Office, Jaipur.

### Present

1. Shri A.B. Mathur
2. Dr. B. Saxena
3. Shri B.L. Dashora
4. Dr. S.P. Varma (Convener)
5. Dr. Iqbal Narain attended the meeting by special invitation.

1. Under Section 34(4)(iv) of the University Act, the Board elected Shri B.L. Dashora as a member other than the Convener of the Board of Studies to serve on the Committee for the Selection of examiners in the subject of the year 1971.

2. The Board went through the reports of examiners and question papers set for the examination of 1970. No Comments were offered, but the Board wished to place it on record that the reports etc. were supposed to have been sent to different members by rotation according to University rules on the subject, but they had not been sent to any member.

3. The Board scrutinised the statements of qualifications and teaching experience etc. of teachers (received from University Teaching Departments, University Colleges, affiliated institutions and other Universities) for inclusion in the revised panel of examiners for 1971 and revised the panel accordingly.

4. The Board recommended courses of study and textbooks in Political Science for the various examinations together with changes in Regulations and Ordinances, if and as given in Appendix A.



5. The Board considered the suggestions received from the Political Science Department of Agarwal College, Jaipur, and from the Department of Political Science, University of Rajasthan. No other suggestions were received. The members took them into consideration while fixing up the syllabii.

6 (a) The Board considered the suggestions of the Vice-Chancellor in connection with the award of sessional marks, and recommended that the present practice of allocating mark to term papers and or term tests be continued, and marks be equally divided between two kinds of tests. Several members of the Board were opposed to the Policy of declaring marks, or even grades to the students, since they had thought that this would create more problems than it would solve, particularly in the affiliated colleges.

(b) The Board considered the suggestion and noted that the present scheme of providing groups at the M. A. Final level was already so designed that one could either offer specialised courses or, take the group on research methodology—in one cause he would prepare himself for a teacher's job and in the other for a researcher's career.

7. With reference to the Academic Council Res. No. 35 Dated 21-4-70, the Board considered the suggestions made by Dr. Daya Krishna with regard to introducing alternative schemes of courses and examinations, was of view that while alternative courses could be drawn up, drawing up alternative schemes of examinations might create complications. So far as the M. A. courses are concerned, there is already a provision for alternative courses. The Board drew alternative courses in one paper at the B. A. III Yr. level.

8. The Board considered the list of publications in Hindi brought out by the Commission for Scientific and Technical Terminology received vide their letter dated 30-7-70 and introduced them in various courses, according to their suitability.

9. The Board considered the list of books of National Book Trust of India received vide their letter dated 7-11-69 and found that, since most of those books dealt with school courses, they could not be adopted at the University level.

10. With reference to the Faculty Arts Res. No. 34(v) dated 4-2-70, the Board considered the re-recommendation of the Board of Studies in Sanskrit to the effect that some

knowledge of Sanskrit be made compulsory for those studying certain subjects, but did not accept it in the case of Political Science.

11. The Board considered the complaint received from different colleges regarding question paper-II of III Yr. Arts (1970) and expressed its satisfaction with the action taken by the Head Examiner.

The meeting ended at 5.16 p.m. with vote of thanks to Chair.

S.d. Varma

(Convener)

## APPENDIX 'A'

1. P.U.C. Examination, 1972 : No change.
2. B.A. Pass First Year Exam. of 1972: No change in syllabus.

From the books recommended delete the following :

1. Gettle : *Introduction to Political Science*.
2. Catlin : *Principles of Politics*,

Add :

- 1 A.D. Pant : राजनीति के मूल आचार

3. B.A. Pass Second Year Exam. of 1973 :

*Paper I* : No change in the syllabus.

Among the books recommended *add* :

1. C.F. Strong : *Modern Constitutions* (English & Hindi).
2. K.R. Bombwall : *Major Government* (English & Hindi)

Delete :

1. Munro : *Government of Europe*.
2. B.M. Sharma : *Modern Governments*.

*Paper II* : *Political and Constitutional Development in India* :

The paper shall consist of two parts :

*Paper I* (a) Nationalist Movement in India 1885 to 1947.

(b) Constitutional Development in India since 1919.

*Paper II* Present Constitution of India and its working :

Among the book recommended :

Delete :

1. V.P. Varma : *Modern Indian Political Thought*.
2. N.D. Palmer : *Indian Political System*.

Add :

1. Hardgrave : *India, Government and Politics in a Developing Nation*.

Also add;

(English and Hindi after the titles of the books by Bombwall, G.N. Singh and Keith. V.P.S. Raghuvanshi, M.V. Pyle).

#### 4. B.A. Pass Final Year Examination of 1974 :

*Paper I* : (a) Candidates will have the option of choosing any one of the following two alternative papers :

*Political Ideologies or Political Concepts and Political Ideologies :*

The paper on Political Ideologies will remain the same except that the following books are to be added :

1. A. D. Pant : राजनीति के मूल आवार
2. V.V. Ramana Murti : *Essentials of Gandhi*.

*Paper I* : (b) will consist of two parts ;

- (A) Political Concepts and
- (B) Political Ideologies.

The candidates will be excepted to be familiar with the following concepts :

Nationalism, Democracy, Secularism; Political system, Political development, political culture, political socialisation, political elite; power, influence; leaitimacy and authority.

Socialism, Marxism, Communism, Fascism, Anarchism, Gandhian Political Thought and Sarvodaya.

Names of books to be recommended later.

*Part II : International Relations since 1919.*

Courses will remain the same.

Among the books recommended add.

1. Dinanath Varma अन्तराष्ट्रीय सम्बन्ध Sixth edition 1970  
ज्ञानदा प्रकाशन, पटना

#### 5. B.A. Hons. Parts I and II Exam. of 1973 & 74.

Part I : No change.

Part II : No change.

*Paper III* : The title to be rewored as *Scope and Methods of Political Science*.

*Paper IV : Indian Political System.*

Add :

1. Hardgrave : *India : Government and Politics in x Developing Nation*.
2. (English and Hindi) after Pylee's book.

**6. M.A. Previous/or M.A. Final Examination of 1972 and 1973 respectively :**

*Paper I :* The title to be reworded as *History of Political Thought from Plato to Marx* (the title had already been corrected last year but the correction did not find place in the printed syllabus).

Add Books : यूनानी राजनीतिक विचारधारा, अनुवादक विष्णुदत्त मिश्र

*Paper II :* No change.

Add Books recommended.

1. आधुनिक राज्य—अनुवादक शंकरनर द्विवेदी
2. मंत्री मण्डलिय शासन—अनुवादक राजमणि तिवारी नुरजमानसिंह
3. विधि विधानों की प्रकृति—अनुवादक गिरजाशंकर मिश्रा

Add : Books राष्ट्रों के मध्य राजनीति—अनुवादक प्रेमनारायण अग्रवाल

*Paper III :* No change.

*Paper IV :* No change.

*Recommended Books.*

Add :

1. H. Simon : *Administrative Behaviour*.
2. *The process of management*.
3. *A Reader in Bureaucracy*.
4. Hardy and Stones : *Comparative Administration*.
5. Report of A.R.S., New Delhi.

*Paper V : Modern Political Theory :* No change Among the core books. Add :

1. Owen Young : *Systems of Political Science*.

*Paper VI : Indian Government and Politics :* No change in the syllabus.

Among the core books, add :

1. Rajni Kothari : *Politics in India*

*Recommended books, add :*

1. Rajni Kothari : *Caste in Indian Politics*.

*Papers VII and VIII*, out of which any two papers from any one of the groups is to be offered :

Group A *Political Theory* will now consist of

- ( i ) (a) *Greek Political Thought*.  
or

(b) *Medieval Political Thought,*

or

(c) *Contractualists,*

or

(d) *Liberals,*

or

(e) *Neo-Platonists*

(f) *Socialist theories.*

( ii ) *Ancient Indian Social and Political Thought and Institutions.*

No change in syllabus.

(iii) *Modern Indian Social and Political Thought.*

No change in syllabus.

Group B : *International Affairs :*

( i ) *International Law.*

(Annexure I)

( ii ) *International Organisation.*

No change,

( iii ) *Theory and practice of Diplomacy :*

(Annexure II)

( iv ) *International Politics with special reference to Foreign Policies of U.S.A., U.S.S.R., U.K., China and India.*

No change.

( v ) *Government and Politics of south Asia.*

No change.

( vi ) *Government and Politics of southeast Asia.*

No change.

( vii ) *Africa in World Affairs.*

No change.

Group C : *Public Administration :*

( i ) *Public Administration in India.*

No change.

( ii ) *Comparative Public Administration.*

No change.

( iii ) *Local Government.*  
No change.

( iv ) *Local Government and Development Administration,*  
etc. No change.

Group D : *Government and Politics :*  
No change.

Group E : *Indian Government and Politics.*  
No change in other papers.

Paper (v)—On *Rural and Urban Politics* to be Added.  
(Courses to be framed later).

Group F : *Sociology :*

Paper (ii) on *Social Psychology* to be deleted.

With regard to the other papers. the Convener was authorised to re-draft the syllabi in consultation with some expert on Political Sociology.

Group G : *Economics.*

papers (ii), (iv) and (vi) to be deleted.

With regard to the remaining papers the Convener was authorised to re-draft the syllabi in consultation with some Economists.

## 7. Post-M.A. Diploma in International Affairs Examination of 1972.

Paper I Theory of International Politics and Research Methods. (Syllabus as given in Appendix).

Paper II International Politics since 1945, with special reference to

- (a) The Role of Major Powers, and
- (b) Contemporary Tension Areas in the world.

Paper III (a) Area Studies with special reference to Government and Politics in the South Asian Region,

Or

(Courses the same as at present)

- (b) Indian Foreign policy : Problems and prospect.  
(Courses the same as at present).

Paper IV Dissertation

Paper V Viva-voce

(Detailed syllabi for Paper II will follow)

*Theory of International Politics and Research Methodology.*

International Politics, Scope and Method; International Relations as a discipline.

International Political System—actors comprising the system structural characteristics; regional sub-systems.

Theories and approaches—

- ( a ) Regarding the actions of States—goals of foreign policy; decision-making process; capability analysis, societal sources of foreign policy.
- ( b ) Regarding the inter-action of States—theories of balance and imbalance, role of alliances. non-alignment, relations of small states and large powers, integration theory, strategic theory, game theory.

Theories of International Organisation—regionalism, functionalism.

Research techniques—Use of Case Studies, Comparative Analysis, quantitative Data content Analysis and survey techniques.

*Books Recommended :*

1. James N. Rosenau, ed., *International Politics and Foreign Policy : A Reader in Research and Theory*, rev. ed., Free Press, New York, 1969 (relevant chapters).
2. Stanley Hoffman, ed., *Contemporary Theory in International Relations*. Prentice Hall, 1960.
3. Raymond Aron, *Peace and War : A theory of International Relations*, Friedrich A. Praeger, 1968.
4. J.W. Burton, *International Relations : A general theory*.
5. W.I.R. Fox, ed., *Theoretical Aspects of International Relations*, Notrepome, 1959.
6. Klaus Knorr and Sidney Verba, ed., *The International System : Theoretical Essays*. Princeton University Press, 1961.



7. Carl W. Deutsch, *The Analysis of International Relations*, Prentice-Hall, inc., 1968.
8. George Liska, *Nations in Alliance : The Limitations of Interdependence*, Johns Hopkins Press, Baltimore 1968.
9. George Liska, *Alliances and the Third World*, Johns Hopkins Press, Baltimore, 1968.
10. Bruce M. Russett, *International Regions and the International System : A Study in Political Ecology* Rand Mc-N. Aolly & Co., Chicago, 1967
11. Ernst B. Haass, *Beyond the Nation State : Functionalism and International Organisation*, Stanford University Press.

**6. Post-M.A. Diploma in Indian Government and Politics.**

*Paper I* : Political Analysis and Research Methodology.

*Paper II* : Politics of Developing Societies with special reference to Political Development in India.

*Paper III* : (a) State Politics in India, or

(b) Indian Foreign Policy : Problems and Prospects, or

(c) Developmental Administration with special reference to India.

*Paper IV* : Dissertation.

*Paper V* : Viva-voce.

(Detailed syllabi will follow.)

## ANNEXURE I

### International Law

#### *A. Peace*

#### **I : Introduction :**

- (a) Nature and sources of the International Law.
- (b) Codification.
- (c) Relation between International Law & Municipal Law.

#### **II : Membership in the International Community.**

- (a) States, individuals and International Organisations as subjects of International Law.
- (b) Recognition of States and Governments.
- (c) State Succession—Acquisition and loss of International personality.

#### **III : Rights and Duties of States.**

- (a) Self defence—Individual defence and Collective defence under U.N. Charter.
- (b) Intervention—Grounds of intervention,

#### **IV : Territory and Territorial Jurisdiction.**

- (a) Territorial boundaries—Land, river, sea, air space and outer space boundaries.
- (b) Internal, territorial and international waters.
- (c) Sovereignty and territorial jurisdiction.
- (d) Nationality and jurisdictions over nationals.
- (e) Jurisdiction over aliens-asylum and extradition.
- (f) International responsibility for damages to aliens and the Law of International Claims.

#### **V : The Conduct and Content of International Relations.**

- (a) The right of legation.
- (b) Diplomatic envoys and consuls—their immunities, privileges and functions.

**VI : Treaties.**

- (a) The making of treaties, kinds, interpretation and termination.

**B. Disputes. War and Neutrality.****I : Disputes and their Settlements :**

- (a) Pacific means—negotiations, conciliations, arbitration, adjudication.
- (b) Violent means—retortion, reprisals, pacific blockade and intervention.

**II : War.**

- (a) Commencement, conduct and conclusion of War.
- (b) War on land—occupation and its effects. Geneva Conventions on treatment of wounded, sick and prisoners of war.
- (c) War Crimes.
- (d) Air warfare.
- (e) Naval Warfare.

**III : Neutrality.**

- (a) Neutrality under Traditional International Law.
- (b) Neutrality and the U.N. Charter.
- (c) Relations between Neutrals and belligerents—war-like operation, war-like preparations, right of angary, unneutral services, continuous voyages, blockade and contrabands.

**C. Law of International Organisation**

- (a) Development of the law of International Organisation.
- (b) International Status of the United Nations Organisation.
- (c) The Concept of Collective Security.
- (d) The Doctrine of Preventive Diplomacy.
- (e) Domestic Jurisdiction.
- (f) Protection of Human Rights.

- (g) The trust and Non-self governing territories.
- (h) The International Court of Justice.
- (i) The International Law Commission.

*Books recommended :*

**Core Books**

1. Oppenheim, L., International Law, Vol. I, Vol. II (London) 8th ed.
2. Fenwick, Charles G., International Law (New York) 1964, 4th ed.
1. Caplan & Katzenbach, The Political Foundations of International Law, N. York, 1961.
4. Rierby, James L., The Law of Nations; An Introduction to the International Law of Peace. (Oxford 1963). 6th ed.

**Additional Readings :**

1. Schwarzenberger, Georg, The Frontiers of International Law (London) 1962.
2. Friedmann, Wolfgang, The Changing Structure of International Law (London) 1964.
3. Jenks, C.W., The Proper Law of International Organisation, (London), 1962.
4. Higgins, Rosalyn, The Development of International Law through the Political Organs of the United Nations (London), 1963.
5. Briggs, Herbert, The Law of Nations : Cases, Documents and Notes (N. Y.) 1953.
6. Shewarzenberger, Georg, A Mannual of International Law, Vol. I and Vol. II, (London: 1960).
7. अन्तर्राष्ट्रीय विधि भाग-1 अनु. के.पी. मिश्र जी. एन. रस्तोगी
8. अन्तर्राष्ट्रीय विधि भाग-2 अनु. के.पी. मिश्र. जी. एन. रस्तोगी ।

## ANNEXURE II

**Theory and Practice of Diplomacy**

1. Origin, nature, development, objectives and functions of diplomacy.
2. Means and methods. Evolution of diplomatic practices—Greek method, Italian method. French method and Indian method.
3. Types of diplomacy—democratic diplomacy, parliamentary diplomacy, summit diplomacy, conference diplomacy, personal diplomacy and coalition diplomacy.  
Old diplomacy. Transition from old to the new. New diplomacy. New techniques and recent developments in diplomacy.
4. Diplomacy of non-alignment diplomacy of aid, diplomacy at the international organisations, commonwealth diplomacy.
5. Propagando in modern diplomacy.
6. Diplomatic agents—their classes and immunities: Position in regard to the third state; the diplomatic body; principle of precedence. Credentials and full powers.
7. International meetings and Transactions; Treaties and other international compacts, Concordat, Additional Articles, Final Act, Process verbal, Ratification, Accession etc.
8. Language of diplomatic intercourse and forms of documents.
9. Advice to diplomats. Changing role of diplomats.
10. Foreign policy and diplomacy.
11. Foreign service and foreign office.

**Core Books—**

1. Nicolson—Diplomacy (3rd ed. Oxford University Press).
2. Nicolson—Evolution of Diplomatic Methods.
3. Krishna Murty—Dynamics of Diplomacy.
4. Hayter Diplomacy of the great powers.
5. Pearson—Diplomacy in the Nuclear Age.

6. Stephen D. Kertesz and M.A. Fitzsimons : Diplomacy in a changing world.

**Additional Readings :**

1. Satow—Guide to Diplomatic practice.
2. Panikar—Principles and practice of Diplomacy.
3. Thayer—Diplomat.
4. Regalla—Trends in diplomatic practice.
5. A.L. Kennedy—Diplomacy—Old and new.  
Eugene Black—Diplomacy of Economic Development.

**Journals :**

Foreign Service Journal  
World Politics  
International Affairs  
International Organization.

## APPENDIX III

*Ref. Resolution No. 21 of 10-2-71)*

Minutes of the meeting of the Board of Studies in Sanskrit held on 16th September, 1970 at 12 noon, at the University Office, Jaipur.

Present

1. Dr. B. N. Sharma
2. Shri Chandra Shekhar -Sharma
3. Shri Bal Chandra Shastri
4. Dr. Fateh Singh
5. Dr. P. L. Bhargava (*Convener*).

1. Under Section 34(4)(iv) of the University Act, the Board elected Dr. Brahmanand Sharma as a member other than the Convener of the Board of Studies to serve on the Committee for the Selection of examiners in the subject for the year 1971.

2. The Board offered comments, after going through the reports of examiners and question papers set for the examination of 1970. (Vide Appendix A.)

3. The Board scrutinised the statements of qualifications and teaching experience etc. of teachers (received from University Teaching Departments, University Colleges, affiliated institutions and other Universities) for inclusion in the revised panel of examiners for 1971 and revised the panel accordingly.

4. The Board recommended courses of Study and text books in Sanskrit for the following examinations together with changes in Regulations and Ordinances, if any :—(vide Appendix B).

1. Pre-University Examination, 1972.
2. B.A. pass First Year Exam. of 1972.
3. B.A. (Pass) Second Year Examination of 1973.
4. B.A. (Pass) Final Year Examination of 1974.
5. M.A. Prev. and/or Final Examination of 1972 and 1973 respectively.
6. B.A. ( Hons. ) Pt. I & II Exam. of 1973-74.

5. The Board duly considered the suggestions received from the teachers of the various institutions and recommended their implementation as far as possible.

6. The Board considered the following suggestions of the Vice-Chancellor made by him in consultation with the Convener of the Examinations Reforms Committee :—

- A. Regarding award of Sessional marks, these may be awarded on the basis of Articulation, Comprehension and Objective Tests of the student as per detail given below :

*Articulation—4 marks*

Each student may be required to write atleast one essay on the subject each term. This may be assessed by 2 independent teachers independently and marks recorded. Marks may be declared publicly and if any student feels aggrieved he may be explained what that particular award given.

*Comprehension—3 marks*

A test may be conducted each term to examine whether the students have picked up the appropriate expression, and have understood the subject matter.

*Objective Test—3 marks*

Under this category marking may be done but the marks may not be shown to the candidate. But the solution may be written by the teacher and posted on the notice board so that the students may know the correct answers. If this rational basis is adopted there is a change of increasing the quantum of internal assessment.

- B. As regards syllabus at the Post-graduate level it is suggested that—

- ( i ) a list of full and half courses may be prepared according to the availability of teaching competence.
- ( ii ) it may be possible for a student to offer two full courses as a topic to give specialisation in that topic. Such a student would prepare himself for research in this topic.
- ( iii ) a student who wishes to learn the subject for becoming a teacher, he may offer 4 half courses



covering variety of topics to have an extensive view of the subject. In fact the students may have to choose one full and two half courses.

- C. For very few bright students it may be suggested that they may be encouraged to do some self-study on pre-assigned topics which are not included in their curriculum and they may be assessed entirely on that as far as sessional marks are concerned.

*Resolved to recommend that* the suggestions of the Vice-Chancellor as given under A and C be accepted. As regards B the Board while agreeing with the suggestion could not frame the courses for want of time. It therefore resolved to recommend that another meeting be convened some time in October to frame the courses.

7. It was reported that Academic Council, vide its Res. No. 35 dated 21-4-70 accepted the following draft resolution prepared by Dr. Dayakrishna, Chairman, Examination Reforms Committee vide his letter No. Acd, c, 1082 dated 17-4-70 as a result of discussions in the meeting of the Examination Reforms Committee held on 17th April, 1970 :—

“Resolved that in the interest of raising standards of teaching and examinations and award of degrees the Board of Studies may prepare alternative Scheme of courses and Examinations in their respective subjects to be implemented as early as possible.”

*Resolved to recommend that* the Board while agreeing with the suggestion could not prepare alternative schemes for want of time. It therefore resolved to recommend to another meeting be convened some time in October for preparing alternative schemes for courses.

8. The Board considered the complaint received from students through the University Department of Sanskrit, Jaipur against question paper V of Group C of M.A. Final Examination along with the remarks of the Paper setter and resolved to recommend that since the paper setter had expressed regret for the mistake the matter be dropped.

Sd—P.L. Bhargava  
Convener.

## APPENDIX 'A'

### Comments on Question Papers & Reports of Examiners :

1. Hindi version of questions has not been given in Paper III inspite of the fact that the Board wanted the lapse to be brought to the notice of the examiner last year also.
2. The examiner of Paper I has used the English technical terms of Philology in the Hindi version of the questions also which has caused unnecessary hardship to candidates studying through the Hindi medium. The lapse should be brought to the notice of the Examiner.
3. Some examiners have even this year given a one word report. They should be requested to give a more detailed report.

## APPENDIX "B"

*Pre-University Examination of 1972—No Change.*

*B.A. (Pass) First Year Examination of 1972 :*

Page 10—1. Prose—Delete the words "अथवा 3, 4 और 5 मात्र)

*B.A. (Pass) Second Year Examination 1973.*

P.65—Substitute the following for the matter of the first three lines :

Paper II—History of Sanskrit Literature, Prose, Translation and Composition.

History of Sanskrit Literature—30 Marks.

P.66-67 Paper II—Substitute the following for the present upto (b) ईशावास्योपनिषद् (P. 67) :

History of Sanskrit Literature, Prose, Translation and Composition.

1. History of Sanskrit Literature :

General study of the following topics :

Epics (The Ramayan and the Mahabharata), The Mahakavyas including Historical Mahakavya, Prose, Drama and Fables.

*Books Recommended :*

Keith : Classical Sanskrit Literature (Heritage of India Series).

Pandya & Vyas : Sanskrit Sahitya ki Rooprekha (Sahitya Niketan, Kanpur).

Dr. Ramji Upadhyaya; Sanskrit Sahitya Ka Alochanatmak Itihas —Publishers : Ram Narayan Lal Beni Madha Allahabad, price Rs. 7.00 p.

Hans Raj Agrwaal:संस्कृत साहित्य का संक्षिप्त इतिहास 2nd Ed. Publisher—Meharchand Lachhmandass, Delhi—6.

P.67 for (C) and (D) substitute : 2 and 3.

*B.A. (Pass) Final Year Examination of 1974 :*

P.129. Paper I—Substitute the following for the present matter :

Selection from Vedic Literature, Prose and Elements of Hindu Culture:

Vedic Literature	—	30 marks
Prose	—	30 marks
Applied Grammar	—	10 marks
Elements of Hindu Culture	—	30 marks

At the bottom substitute the following for the present matter :

Paper I—Selections from Vedic Literature, Prose and Elements of Hindu Culture.

P.130.—I Substitute the following for the present matter upto line 3 (Dass, Delhi 6) on p.131 :

1. Vedic Literature :

(a) The following hymns from the Rigveda :

Varuna	—	1.25
Surya	—	1.115
Vishnu	—	1.154
Indra	—	2.12
Ushas	—	3.61
Apas	—	7.49
Prajapati	—	10.121

*Books Recommended* :—Rigveda Saurabham edited by Shri Mool Chand Published by Kitabghar Alwar Price Rs. 1.58p. latest edition.

*Notes* : Students will be required to translate or explain the suktas mentioned above and give short notes on the characteristic features of the deities concerned.

(b) ईषावास्योपनिषद्

2. Prose : गद्यप्रभा-डा. प्रभाकर शास्त्री और डा. पुष्करदत्त शर्मा (omitting) (भारत दुर्दशा)

3. Applied grammar : Use of Karakas

*Books Recommended* :—Babu Ram Saxena: Sanskrit Vyakarana Praveshika (Ram Narain Lal Beni Madhava, Allahabad, Price Rs. 5/-

M. K. Sarkar and Gokul Chanda :  
Vyakarana Pradeep (Oriental Book  
Depot Nai Sarak Delhi—Price Rs.  
5.50 p.)

P.131—Omit the following :

Masson Orsal : Ancient India and Indian Civilizations.  
याज्ञवल्क्यस्मृति— आचाराध्याय— First Five Prakaranas.

P.132 : 1. Rapid Reading—Substitute the following for the  
present matter.

Bhagavadgita Chapters I and II.

द्वा सुपर्णा by Ramji Upadhyaya (Ram Narain Lal Beni  
Madhav, Allahabad—Price 3.00).

Among Books recommended add : संस्कृत निबन्ध पारिजात by  
N.K. Gautam and Subhash Vedalankara (Distributor—  
Malik & Co., Jaipur.)

*B.A. (Honours) Part I Examination of 1973.*

P.196.—Books prescribed : At the end of : 5. Rajatarangini-  
Taranga I Verses 1-82.

add : Edited by Subhash Vedalankara.

*B.A. (Honours) Part II Examination of 1974*

P.246.—Under Books prescribed—substitute the following for  
the present matter :

Harshacharita Sangraha by R.V. Krishnamachari and  
Published by R.P.Rajan 29,II Street,Teleport Colony  
West Mambalam, Madras 33, Price Rs. 2/-

P.247.—Delete Masson Orsal—Ancient India and Indian  
Civilization.

*M.A. Previous and Final Examination of 1972 and 1973  
respectively.*

P.318—(a) Vedic Literature :

(i) Substitute the following of the present matter :  
The New Vedic Selection by N.K.S Telang and  
B.B. Chaubey.

(Published by Prachya Bharati Prakashana, Kamachha  
Varansi.)

The following hymns from the Rigveda are prescribed :  
Nos. 3, 4, 5, 6, 7, 8, 9, 10, 13, 14, 16, 17, 18, 20, 21,  
22, 25, 26, 27 and 28.

P.319:Paper II—After 3. Bana : Kadambari substitute the following for the present matter :

from beginning to राजनूतोर्जन्म महोत्सव :

P,321:At the end delete 3. S.K. De and Das Gupta : History of Classical Literature.

P.322:Change 4, 5 and 6 to 3, 4 and 5.

Under books recommended : add

5. Macdonell : History of Sanskrit Literature

6. S.K. De and Das Gupta : History of Classical Sanskrit Literature.

P.325:Paper II After Yaska's Nirukta delete Divata Kanda.

P.326:Paper III—Among Books prescribed add—

3. Yaska's Nirukta : Daivata Kanda.

## APPENDIX IV

*Ref :-Res. No. 21 of 10-2-70)*

Minutes of the Meeting of the Board of Studies in Urdu, Persian and Arabic held on September 16 and 17, 1970 at 12 noon, at the University Office, Jaipur.

**Present**

1. Dr. M.A. Zaidi, (Convener)

2. Dr. Mazhar Ali

3. Shri A.F. Usmani

4. Shri Saqib Hasan Rizvi

N.B. Shri Mazhar Ali Could not attend meeting on 17th and Shri Saqib Hasan Rizvi on 16th Sept., 1970.

1. Under Section 34 (4) (iv) of the University Act, the Board elected Shri A.F. Usmani as a member other than the convener of the Board of Studies to serve on the Committee for the Selection of examiners in the subject for the year 1971.

2. The Board offered no comments, after going through the reports of examiners and question papers set for the examination of 1970.

3. The Board scrutinised the statements of qualifications and teaching experience etc. of teachers (received from University Teaching Departments, University Colleges, affiliated institutions and others Universities) for inclusion in the revised panel of examiners for 1971 and revised the panel accordingly.

4. The Board recommended courses of Study and text books in URDU and PERSIAN for the following examinations together with changes in Regulations and Ordinances, if any :—(vide Appendix A).

1. Pre-University Examination, 1972.

2. B.A. pass First Year Exam. of 1972.

3. B.A. (Pass) Second Year Examination of 1973.

4. B.A. (Pass) Final Year Examination of 1974.

5. M.A. Prev. and/or Final Examination of 1972 and 1973 respectively.

## 6. B.A. (Hons.) Pt. I &amp; II Exam. of 1973-74.

5. No Suggestions of the teachers in regarded to courses of Study in Urdu and Persian have been received from any institution.

6. The Board considered the following suggestions of the Vice-Chancellor made by him in consultation with the Convener of the Examinations Reforms Committee :—

- A. Regarding award of Sessional marks, these may be awarded on the basis of Articulation, Comprehension and Objective Tests of the students as per details given below :

*Articulation—4 marks*

Each student may be required to write atleast one essay on the subject each term. This may be assessed by 2 independent teachers independently and marks recorded. Marks may be declared publicly and if any students feels aggrieved, he may be explained what that particular award given.

*Comprehension—3 marks*

A test may be conducted each term to examine whether the students have picked up the appropriate expression, and have understood the subject matter.

*Objective test—3 marks*

Under this category marking may be done but the marks may not be shown to the candidate. But the solution may be written by the teacher and posted on the notice board so that the students may know the correct answers. If this rational basis is adopted there is a change of increasing the quantum of internal assessment.

- B. As regards syllabus at the Post-graduate level, it is suggested that—

- (i) a list of full and half courses may be prepared according to the availabilty of teaching competence.
- (ii) it may be possible for a student to offer two full courses as a topic to give specialisation in that topic. Such a student would prepare himself for research in this topic.



(iii) a student who wishes to learn the subject for becoming a teacher, he may offer 4 half courses covering a variety of topic to have an extensive view of the subject. In fact the students may have to choose one full and two half courses.

- C. For very few bright students it may be suggested that they may be encouraged to do some self-study on pre-assigned topic which are not included in their curriculum and they may be assessed entirely on that as far as sessional marks are concerned.

The suggestion of the Vice-Chancellor appears to be good and worth trying but since there are no M.A. classes in Urdu, it does not concern the Board. The Board unanimously and strongly recommends that M.A. Classes in Urdu be started in the University from the next session.

6. It was reported that Academic Council, vide its Res. No. 35 dated 21-4-70 accepted the following draft resolution prepared by Dr. Dayakrishna, Chairman, Examination Reforms Committee vide his letter No. Ac/c/1082 dated 17-4-70 as a result of discussions in the meeting of the Examination Reforms Committee held on 17th April, 1970 :—

“Resolved that in the interest of raising standards of teaching and examinations and award of degrees the Board of Studies may prepare alternative Schemes of courses and Examinations in their respective subjects to be implemented as early as possible.”

*Resolved to recommend that another meeting of the Board of Studies in Urdu, Persian and Arabic be called in near future to prepare alternative scheme of courses and Examinations in Urdu and Persian.*

Alternate scheme could not be prepared in this meeting as both the external members did not attend, besides this, it would take pretty long time—atleast a full day.

M.A. Zaidi

## APPENDIX A

### Courses of Study

#### URDU

1. Pre-University Examination 1972. No change.
2. B.A. Pass First Yr. Exam. of 1972.  
There will be one paper of three hours duration carrying 100 marks.

*Paper* (Prose, Poetry and Rapid Reading).

Text books prescribed :—

#### *Prose and Poetry*

Khayab-e-Adab by Azeemul Haque Junedi.

(Educational Book House, Aligarh-2) Price Rs. 3.75

The following portions have been omitted in Poetry Section.

*Qasaid* :—Sauda, Zauq, Momin, Muneer, Ameer, Meenace and Aziz Lucknavi.

*Mashnaviyat* :—Meer Hasan, Daya Shanker Naseem and Mirza Strauq.

*Marsiya* :—Mirza Dabeer, Iqbal and Brij Narain Chakbast.  
Rapid Reader No change

3. B.A. (Pass) Second Year Examination of 1973 No change
4. B.A. (Pass) Final Year Examination of 1974 No change
5. M.A. Pre. and Final Examination of 1972-73 No change respectively.
5. B.A. (Hons.) Pt. I & II Exam. of 1973-74 No change

#### PERSIAN

1. Pre-University Examination of 1972
  2. B.A. (Pass) First Yr. Examination of 1972
  3. B.A. (Pass) Second Year Exam. of 1973
  4. B.A. (Pass) Final Year Exam. of 1974
  5. M.A. Pre. and Final Exam. of 1972 & 1973 respectively.
  6. B.A. (Hons) Pts. I & II Exam. of 1973-74.
- } No change

## APPENDIX V

(Ref:-Faculty of Arts Res. No. 21 of 10-2-71)

Minutes of the Meeting of the Board of Studies in Sociology held on Monday, the 28th September 1970 at 12.00 Noon in the University of Rajasthan.

Present

1. Shri M.M. Lavania
2. Shri J.P. Sharma
3. Shri C.S. Somani
4. Dr. Ram Ahuja (*special invitee*)
5. Professor T.K.N. Unnithan (*Convener*)

1. Under Section 34 (4) (iv) of the University Act, the Board unanimously elected Shri J.P. Sharma to serve on the Committee for the selection of examiners in the subject for the year 1971.

2. The Board went through the reports and the question papers set for the examinations of 1970. As Item No. 8 of the agenda related to this it was decided to take it up along with this item. The Board considered the complaints against two M.A. Papers, i.e. Paper V and Paper No. VII and the reply received from one of the examiners. The Board felt that there was some justification in the complaint against Paper VII as a few questions were definitely from outside the course. It was therefore, decided to recommend that in order to avoid such complaints in future, as far as possible, only such persons who have taught these papers and/or who are continuously in touch with the teaching of these papers should be appointed as paper-setters and examiners. About the complaint against Paper V, it was felt that since the students were not adversely affected by the change in pattern of the paper, no action was necessary against the examiner. However, the University should take special care in bringing to the notice of the paper-setter that any sudden change in the usual pattern should be avoided as far as possible.

3. The Board scrutinized the statement of qualifications etc. and revised the panel of examiners accordingly and necessary corrections incorporated. The Board also scrutinised fresh applications received and recommended the names for inclusion in the panel.

4. The Board considered the courses of study and textbooks in sociology for the following examinations :—

1. Pre-University examination of 1972.
2. B.A. (Pass) I Year Examination of 1972.
3. B.A. (Pass) II Year Examination of 1973.
4. B.A. (Pass) III Year Examination of 1974.
5. M.A. Previous & Final Examinations of 1972 and 1973 respectively.
6. B.A. (Honours Part I and II Examinations of 1973 and 1974 respectively.

The Board was of the view that no changes were necessary in the syllabi this year. However, it felt that in view of latest development in Sociology and in view of the opinions expressed by several teachers from the colleges and University Department regarding the necessity for changing the syllabi, the following special Committee be appointed to review thoroughly the whole question of syllabi for various classes and make necessary recommendations :—

1. Professor R.N. Saksena
2. Professor Yogendra Singh
3. Professor O.P. Sharma
4. Dr. M.M. Lavania
5. Shri J.P. Sharma
6. Shri C.S. Somani
7. Dr. Ram Ahuja
8. Professor T.K.N Unnithan (*Convener*)

The Committee would send its report directly to the University for immediate action. In this connection, the Board reconsidered its recommendation No. 5 (b) dated the 10th September 1969 regarding the observational report in respect of the paper on Social Survey for the III Year Examination referred back to the Board by the Faculty of Arts vide its Resolution No. 34 (i) dated 4-2-1970 and decided to refer it also to the above-mentioned Special Committee for necessary recommendation.

5. Various suggestions received from teachers with reference Resolution No. 40 of the Academic Council dated the 15th January 1969, were discussed. The Board did not have any specific recommendation to offer in this connections as some of the suggestions did not strictly fall within the purview of the Board and others could well be examined by the Special Committee constituted.

6. The Board considered the suggestions of the Vice-Chancellor regarding the award of sessional marks, syllabus at the post-graduate level etc. and decided to refer these suggestions also to the Special Committee referred to above for necessary recommendations.

7. The Board considered the recommendation of the Chairman of the Examination Reform Committee regarding Alternate courses and decided to refer this issue also to the above-mentioned Sub-Committee.

The meeting ended with a vote of thanks to the Chair.

(T.K.N. Unnithan)

*Convener*

## APPENDIX VI

( *Ref:-Faculty of Arts Res. No. 21 of 10-2-71.* )

Minutes of the Meeting of the Board of Studies in Music held on 23-10-1970 at 12 noon at the University Office, Jaipur.

### Present

1. Prof. N.V. Patwardhan.
2. Shri P.N. Chichore.
3. Shri Rajabhau Deo.
4. Shri M.R. Nagar.
5. Smt. Shanti Sahal.
6. Smt. Sudha Shreevastav.
7. Smt. Chandrakala Sharma.

1. Under Section (34) (4) (iv) of the University Act, the Board elected Smt. Sudha Shreevastav as a member other than the convener of the Board of Studies to serve on the Committee for the selection of examiners in the subject for the year 1971.

2. After going through the reports of the examiners and the question-paper set for the examination of 1970, no comments were offered.

3. The Board scrutinized the statements of qualifications and teaching experience etc. of teachers (received from University Colleges, affiliated Institutions and other Universities) for inclusion in the revised panel of examiners for 1971 and revised the panel accordingly.

4. The Board recommended courses of Study and text books in Music for the following examinations together with changes in Regulations and Ordinances, if any (Vide Appendix A).

1. Pre-University Examination, 1972.
2. I Year T.D.C. (Arts) Examination, 1972.
3. II Year T.D.C.(Arts)Examination, 1973.
4. Final Yr. T.D.C. (Arts) Examination, 1974.

5. M.A. (Previous) and Final Examination 1972 and 1973, respectively,

5. Suggestions were received only from the teachers of the B.V.College of Arts and Science, Banasthali. These suggestions were considered and some of them were approved by the Board. They have been included in the proposed changes in Course of Study at various examinations (Vide Appendix A.)

6. The Board considered the following suggestions of the Vice-Chancellor made by him in consultation with the Convener of the Examinations Reforms Committee :-

- A. Regarding award of Sessional marks, these may be awarded on the basis of Articulation, Comprehension and Objective Test of students as per details given below :-

*Articulation—4 marks*

Each student may be required to write atleast one essay on the subject each term. This may be assessed by 2 independent teachers independently and marks recorded. Marks may be declared publicly and if any student feels aggrieved he may be explained what that particular award given.

*Comprehension—3 marks*

A test may be conducted each term to examine whether the students have picked up the appropriate expression, and have understood the subject matter.

*Objective Test—3 marks*

Under this category marking may be done but the marks may not be shown to the candidate. But the solution may be written by the teacher and posted on the notice board, so that the students may know the correct answers. If this rational basis is adopted there is a change of increasing the quantum of internal assessment.

- B. As regards syllabus at the Post-graduate level I suggest that—

- (i) a list of full and half courses may be prepared according to the availability of teaching competence.
- (ii) it may be possible for a student to offer two full courses as a topic to give specialisation in that topic. Such a student would prepare himself for research in this topic.
- (iii) a student who wishes to learn the subject for becoming a teacher, he may offer 3 half courses covering a variety of topics to have an extensive view of the subject. In fact the students may have to choose one full and two half courses.

C. For very few bright students it may be suggested that they may be encouraged to do some self-study on pre-assigned topics which are not included in their curriculum and they may be assessed entirely on that as far as sessional marks are concerned.

*Resolved to recommend that :* no change in the present method of awarding sessional marks in the theory papers on the basis of class tests and Home Assignments is necessary. The Board felt that the marks should not be declared. The answers, however, should be discussed with the students and they should be told about the mistakes, if any.

It was felt that the courses of study at the past graduate level, especially those of the practical papers could not be divided in half and full courses as suggested. Maturity and practice help in better understanding of the courses learnt earlier. Hence it is not desirable to divide the courses in parts.

7. It was reported that Academic Council, vide its Res. No. 35 dated 21.4.70 accepted the following draft resolution prepared by Dr. Daya Krishna, Chairman, Examination reforms Committee vide his letter No. Acd.c, 1082 dated 17.4.70 as a result of discussions in the meeting of the Examination reform Committee held on 17th April, 1970 :-

“Resolved that in the interest of raising standards of teaching and examinations and award of degrees the Board of Studies may prepare alternative Schemes of courses and Examinations in their respective subjects to be implemented as early as possible.”



*Resolved to recommend that :* there is no necessity of having alternative Scheme as the post graduate classes in Music are conducted only at one centre i.e. Banasthali Vidyapeeth, Banasthali. The Board was of the view that the aim should be consolidation of the present scheme rather than introducing experimental measures at present.

8. With reference to the Academic Council Res. No. 11 (iv) dated the 22nd march, 1969 and the Faculty of Arts Res. No. 9 dated 3rd Feb., 1970 the Board reconsidered its recommendation No.6 made at its meeting held on 12th Sept., 1968 and observed that the introduction of B.A. (Hons.) courses in Music will certainly help in raising the standard of candidates who offer Music in under-graduate classes. This will also help in raising the standard of post-graduate classes as better students will seek admission in these classes. Introduction of Honours courses will be a proper incentive for those students who have an aptitude for music and for those who would like to pursue it more thoroughly and seriously.

9. With reference to the Faculty of Arts Resolution No. 20 dated 3 Feb., 1970, the Board postponed reconsideration of the suggestion made by it vide its resolution No. 11 dated 9th Sept., 1969 regarding introducing Kathak dance as an optional subject for the degree classes as the experts in the field had not given their view.

The Board however, desired that the following persons be contacted to get their views on the subject :-

1. Shri Mohan Khokar,  
Special officer (Dance,) Sangeet Natak Academy,  
Ravindra Bhawan,  
Ferozshah Road, New—Delhi
2. Shri Sundar Lal Gangani,  
Lecturer in Dance, College of Music and Fine Arts,  
M.S. University, Baroda (Gujrat).

10. The Board considered a complaint dated 11.5.70 received from G.R. Rajurkar, Lecturer in Music, Kanoria Mahila Mahavidyalaya, Jaipur against the question-paper I of III Yr. T.D.C. Arts (1967 revised) examination along with the remarks of the paper-setter to whom a reference was made.

The Board observed that the complaint was baseless and the remarks of the paper-setter were accepted.

11. The Board considered a complaint dated 3-4-70 received from (Miss) S. Mishra, Lecturer in Music, through the Director, Maharani's College, Jaipur against the question paper on Music (Theory) of Pre-University (Arts) Examination, along with the remarks of the paper-setter to whom a reference was made.

The Board resolved that the complaint was correct. The examiner should be more careful to see that no question is set which is not covered by the courses of studies prescribed for the examination concerned.

12. With reference to Resolution No. 7 dated 12-9-1968 of the Board of Studies in Music, the Board recommend the proposal of Shri B.R. Deodhar for recognising the B.Mus. and M.Mus. degrees of Banaras Hindu University, Varansi and M.S. University, Baroda for employment of lecturers in Music at graduate and Post-graduate level together with a letter dated 20-12-1969 of the convener, B.O.S. (to whom a reference was made in view of the above mentioned resolution).

The Board decided that the degrees of Banaras Hindu University, Varansi and M.S. University Baroda may be considered to be equivalent to our degrees as both of these are constituted Universities and they have a very good standing in the field of Music also.

13. The Board considered letter No. 1035/RU/Pss/2225 dated the 20th September, 1969 received from the Registrar, Prayag Sangeet Samiti, Allahabad to recognise the following examinations conducted by the Prayag Sangeet Samiti, Allahabad as equivalent to the corresponding examination of this University.

1. Sangeet Praveen—For appointment as a Lecturer in graduate classes.
2. Sangeet Acharya—For appointment as a Lecturer in Post-graduate classes.

The Board considered the standing of the Institution, courses of studies prepared for the examination and the duration fixed for completing these courses and resolved that the Sangeet Praveen degree of the Prayag Sangeet Samiti may be considered to be a suitable qualification for the purpose of employment as a Lecturer. This degree may be regarded as equivalent to M.A. Music.

14, The Board considered a letter No. F. 9 (II) sa/67 dated the 11th September, 1969 from the Section Officer, General Administration, Government of Rajasthan sending therewith the Rules and the copies of the syllabus for the Pre-degree and Post-graduate examination conducted by the Bhartiya Sangeet Vidyapeeth, Jaipur and requesting to intimate the Government with the opinion of the University regarding recognition of the said examinations of the Vidyapeeth as equivalent to the corresponding Examinations of the University.

The Board resolved that the question of considering the equivalence of various Examinations conducted by the said institution concerned with those of our degrees may be dropped at present as the institution has not got a long standing in the field of Music,

Sd/-N.V.Patwardhan  
(Convener)

## APPENDIX A

### I Year T.D.C. (Arts) Examination, 1972

#### *Practical A—Vocal Music*

1. In column drop the names of the that's. It will read as follow.

Prescribed ragas : Yaman, Bihag, Gand Sarang Deshkar Shankara, Alhaiya Bilawal, Bhairav, Bageshree, Bheempalasi and Jounpuri.

2. In column 6 drop 'Jounpuri'.

3. In column 8 add 'Jounpuri'.

### II Year T.D.C. (Arts) Examination, 1973

Delete 55 and add 45 in the third line. The practical will be for a duration of 45 minutes only.

### III Year Arts Examination, 1974

Delete 50 Insert 40 in the second line so that each paper will be of 40 marks. Delete 100 and Insert 120 in the fourth line so that the practical will carry 120 marks.

### M.A. (Previous) Examination, 1972

Paper III & VI } Add Rags Brindavani Sarang, and Bihag in  
(Practical) }  
in the Compulsory Group.

#### Optional Group—

1. In column two delete three add insert two in the second line.

2. In column three add 'in which only chote khyals or Rajakhoni gat should be prepared' at the end.

3. In column four delete twenty and insert eighteen in the first line, delete seventeen and insert fifteen in the second line. Delete seventeen and insert fifteen in the fourth line and deleted twenty and insert eighteen in the fifth line.

**M.A. (Final) Examination, 1973****Practical (Paper VIII)**

Allotment of marks : 125 marks.

(a) Choice Rag : 25 marks (b) Question Khyal or Gat (Slow 30 marks) (c) Question Khyal or Gat (fast) : 25 marks (d) Alap : 20 marks (e) Dhrupod or Dhamar etc. 25 marks.

Total 125 marks.

**Paper IX**

Delete first line. Allotment of marks will 25 each for a, b, c. The total marks being 75.

**Paper VIII & IX (Practical) (on Page No. 187)**

**Compulsory Group :**

Delete Purvi and insert Shree.

**Changes in the Instrumental Music Courses**

Ist Year T.D.C.,

1972

} B. Instrumental Music

1, 2, 3, 4 and 5 same as Vocal Music except singing is to be replaced by playing.

6. To the accompaniment of Table to play one Vilambit gat 'दिलम्बित गत' fast gat द्रुतगत with five Todas and Jhala in the following Ragas :—

1. Janupuri

2. Bageshwari

3. Yaman

4. Bheempalasi

7. To play one fast gat द्रुतगत with Todas and Jhala तोड़ा और झाला in the following Ragas :—

1. Deshkovd,

2. Shankar,

3. Gand Sarang.

8. A gast-gat द्रुतगत and elementary Jod work and Jhala (जोड़ का काम और झाला) in the following Ragss :—

1. Bihag

2. Gand Sarang

3. Kalingra

## II Year T.D.C., 1973

### *Instrumental Music*

Clause 1, 2, 3 and 4 same as vocal music, Singing may be replaced by playing.

5. To the accompaniment of Tabla one slowgat (विलम्बित गत) and one fast gat (द्रुतगत) with few Jod-work (जोड़ का काम) and at least five Todas and Jhala in the following Ragas :

(1) Kamod (2) Bhairaw (3) Malkuns (4) Miyan Malhar.

6. To the accompaniment of Tabla to play one fast gat (द्रुतगत) with few Todas and Jhala etc. in the following Ragas :—

(1) Chhayanat (2) Bahar (3) Hameer (4) Purvi and (5) Desh.

7. One fast gat and practice at Jod Jhala and Meend work in the following Ragas :—

(1) Hindor (2) Gondmalhar (3) Raw Kali.

8. To play a Dhun in any Ragas.

## Final Year T.D.C., 1974

### *B. Practical (Instrumental)*

Clause 1 to 4 same as Vocal Music singing may be replaced by playing.

1. To the accompaniment of Tabla to play one slow gat (विलम्बित गत) and one fast gat (द्रुतगत) with few Jod-Alab and at least 6 Todas and Jhala in the following ragas—

(1) Darbari Kanara (2) Suddhakalyan (3) Brindavani-Sarang (4) Chayanat (5) Jaijawanti.

2. To play a fast gat (द्रुतगत) with few Todas and Jhala with the accompaniment of Tabla :—

(1) Adana (2) Multani

(3) Puri-Donshree (4) Vibhas

(5) Basant.

3. To play one slow and fast gat (विलम्बित और द्रुतगत) and also Alaps, with detailed practice in Meend, Zamzoma, Ghasit, Kratan, Jod-work and varieties of Jhalas in the following Ragas :—  
(1) Darbari Kanara      (2) Todi (3) Lalit.
4. To the accompaniment of Tabla, one gat in any Ragas from any of the following Talas—  
Jhatal, Ektal, Rupak, Dhamar, Ada-Chautal, and Deepchandi.
5. To play a Dhun in any Ragas.

## APPENDIX VII

(Ref :—Faculty of Arts Res. No. 21 of 10-2-71)

Minutes of the Meeting of the Board of Studies in History held on Tuesday the 29th September 1970 at 12 noon in the Department of History and Indian Culture, University of Rajasthan, Jaipur.

## Present

1. Dr. G.C. Pande (Convener)
2. Dr. G.N. Sharma
3. Shri K.R. Vable
4. Shri Satya Bhanu
5. Dr. Dasharatha Sharma

1. Under Section 34(4) (iv) of the University Act, Dr. G.N. Sharma unanimously elected as a member other than the convener of the Board of Studies to serve on the Committee for the Selection of Examiners in the subject for the year 1971.

2. The Board offered no comments on the reports of examiners and question paper set for the examination of 1970, except that Paper I (Revised Scheme 1967) in Third year T.D.C. deviated from the syllabus.

3. The Convener and Dr. G.N. Sharma were authorised to draw up the revised panel of Examiners indicating the specialization of examiners for post-graduate examination.

4. (a) It was resolved that the detailed syllabus for the various papers prepared and circulated last year should be where the papers are the same, circulated and sent to the examiners this year also. This is necessary in order to secure some uniformity in teaching and examining especially in the absence of moderation.

(b) Outline syllabus for paper I (c) of M.A. Previous was also approved for circulation (Vide Appendix 'A')

(c) The Board resolved to recommend the following courses of study and text books in History for the examinations noted below :



1. P.U.C. Exam. 1972—No Change.
2. B.A. Pass First Year Exam. of 1972—No Change.
3. B.A. Pass Second Year Exam. of 1973—  
Paper I—Ancient Indian History and Thought (upto 1000 A.D.)

**Add to syllabus**

Indus Valley Civilization, Vedic Age,  
Paper II—History of India (1000–1707 A.D.)

**Add to the syllabus :**

Chauhan Ascendancy.

4. B.A. Pass Third Year Examination of 1974—  
Paper I—History of India (1707–1950)

**Add to the syllabus**

Rise of the Peshwas.

5. B.A. Honours Part I Examination of 1973—  
Paper I—Political History of India from the Earliest Times to 1000 A.D.

*Delete*—V.A. Smith : Early History of India (O.U.P.)

Paper II—Political History of India from 1000 to 1707 A.D.

Paper III—Modern India (1707–1947)

Paper IV—European History (1789–1919)

*Delete* Paper (b).

6. B.A. Honours Part II Examination of 1974—  
Paper I—Outline of Ancient Indian Civilization.

Paper II—Modern World (1919–65)

*Delete*—Paper (b)

Paper III–IV—Substitute as follows:—

Two papers out of the following :

- (a) History of England (1458–1919)
- (b) Political Theory and Theory and Constitutions (India, England and U.S.A.) (Machivelli, Hobbes, Locke Rousseau, J.S. Mill, Marx).
- (c) History of Europe (1453–1950)
- (d) History of Far East (1850–1950)
- (e) History and Culture of South Asia (Excluding India).

7. M.A. Previous Examination of 1972 and Final Examination of 1973.

- (i) Existing Scheme as modified in Appendix 'A'
- (ii) Alternate scheme as in Appendix 'B'

8. Diploma Examination in Indian Culture

Paper I—History of Indian Philosophy.

Paper II and III.

Change paper (a) to Palaeography and Numismatics.

Add : (e) Elements of Indian Archaeology (Protohistoric and early historic).

(f) History of Science in India.

(g) Ancient History, Culture and Archaeology of Rajasthan.

4. (c) The convener was authorised to make suitable additions to the works of these papers.

5. The Board considered the suggestions received from the teachers of the various Institutions, while framing the various courses of the University.

6. The Board considered the following suggestions of the Vice-Chancellor made by him in consultation with the Convener of the Examinations Reforms Committee :—

- A. Regarding award of Sessional marks. these may be awarded on the basis of Articulation, Comprehension and Objective Tests of the students as per details given below :—

*Articulation—(4 marks)*

Each student may be required to write atleast one essay on the snbject each term. This may be assessed by 2 independent teachers independently and marks recorded. Marks may be declared publicly and if any student feels aggrieved he may be explained what that particular awarded given.

*Comprehension —(3 marks)*

A test may be conducted each term to examine whether the students have picked up the appropriate expression, and have understood the subject matter.

*Objective test —(3 marks)*

Under this category marking may be done but the marks may not be shown to the candidate. But the solution

may be written by the teacher and posted on the notice board, so that the students may know the correct answers. If the rational basis is adopted there is a change of increasing the quantum of internal assessment.

B. As regards syllabus at the Post-graduate level, I suggest that—

- (i) a list of full and half courses may be prepared according to the availability of teaching competence.
- (ii) it may be possible for a student to offer two full courses as a topic to give specialisation in that topic. Such a student would prepare himself for research in this topic.
- (iii) a student who wishes to learn the subject for becoming a teacher he may offer 4 half courses covering a variety of topics to have an extensive view of the subject. In fact the students may have to choose one full and two half courses.

C. For very few bright students it may be suggested that they may be encouraged to do some self-study on pre-assigned topics which are not included in their curriculum and they may be assessed entirely on that as far as sessional marks are concerned.

Regarding the award of sessional marks, the Board resolved that the scheme did not appear practicable the present Scheme itself contains within it the possibility of better implementation.

Regarding the syllabus at the Post-graduate level, the Board resolved that while welcoming the possibility of introducing half-courses, it felt that their proper implementation appeared to require the Semester system.

Regarding the suggestion for the encouragement of bright students to do some self-study, the Board felt that it can be adopted with in the present System of Sessional tests.

7. It was reported that the Academic Council, vide its Res. No. 35 dated 21-4-70 accepted the following draft resolution proposed by Dr. Dayakrishna, Chairman Examination Reforms Committee vide his letter No. Acd/c/1082 dated 17-4-70 as a result of discussions in the meeting of the Examination Reform Committee held on 17th April, 1970 :—

“Resolved that in the interest of raising standards of teaching and examinations and award of degrees the Board of Studies may prepare alternative Schemes of courses and Examinations in their respective subjects to be implemented as early as possible.”

The Board suggested the Alternative Scheme as per Appendix ‘B’ in connection with the raising of standards of teaching and examinations etc.

8. The Board considered in the list of Publications as printed in the catalogues received from the Senior Research officer, Commission for Scientific and Technical Terminology (Ministry of Education) New Delhi vide his letter dated 30-7-1970 for inclusion in the University Syllabi and authorised the convener to include any Suitable books, printed in the aforesaid Catalogues, in the University Syllabus.

9. The Board considered the list of publications as printed in the Catalogues received from the National Book Trust, India, vide its letter No. F. 37-2/69/Sc dated the 7th Nov., 1969 for inclusion in the University Syllabi and authorised the Convener to include suitable books from the aforesaid catalogues in the University Syllabi.

10. With reference to the Faculty of Arts resolution No. 34 (V) dated the 4th February, 1970 the Board of reconsidered the recommendation of the Board studies in Sanskrit to the effect that some knowledge of Sanskrit be made compulsory for those studying Indian Languages, Ancient Indian History, Indian Philosophy or Modern Indian Political Thought and institutions for their M.A. Examination as suggested by the Board vide its Resolution No. 8 dated the 8th Sept., 1969.

Resolved that the Board does not think necessary to make the study of Sanskrit Compulsory for the students of History.

Sd/-Dr. G.C. Pande  
(Convener)

## APPENDIX 'A'

**M.A. Previous Examination of 1972 and M.A. Final Examination of 1973****M.A. PREVIOUS**

Paper I—Either (a) Modern World (1917-45)  
Delete I (b) and I (c) and

*Add* : (b)

or (b) Contemporary India and the World  
(1935-70)

Paper II—Either (a) European History (1789-1870)  
or (b) European History (1870-1919)  
or (c) History of England (1815-1919)  
or (d) Constitutional History of England (1803-1931)

*Add* : (e), (f), (g) and (h).

or (e) East Asia (1840-1950) (China and Japan)  
or (f) West Asia (1815-195 ) (Turkey, Iran and Arab World, including Egypt).  
or (g) History of U.S.A. (1776-1950)  
or (h) History of Russia since 1860.

Paper III—Delete (a), (b), (c), (d) and (e)

*Add* : Either (a) History of Rajasthan (1200-1900)  
or (b) Social and Cultural History of Rajasthan (800-1800).  
or (c) Social and Cultural History of South India.

Paper IV— Delete Paper (a) and (d)

*Add* : Either (a) History of Indian Thought (The students offering this paper may offer any of the groups, A, B and C in M.A. Final)  
or (b) Medieval India (1200-1526 A.D.)  
or (c) Modern India (1756-1858 A.D.)

**M.A. FINAL**

There shall be four papers, three from any one of the following alternative groups of Indian History corresponding to the IV paper of M.A. Previous and any one from the various alternatives in the fourth paper. Students offering paper IV (a) in M.A. Previous can, however, opt. for any of the groups in the M.A. Final Examination. Each paper shall be of three

hours duration carrying 100 marks (Theory 90, sessional 10). Besides, there shall be a viva-voce test of 100 marks. The viva-voce Board shall consist of two persons of whom one shall be the Head of the Department concerned.

### GROUP A—ANCIENT INDIA

Paper I (a)—Ancient Indian History (350 B.C.—650 A.D.)

Paper II (a)—Either ( i ) Ancient Indian Art, Architecture and Iconography.

or ( ii ) Elements of Indian Archaeology.

or (iii) Epigraphy and Numismatics.

Paper III (a)—Either ( i ) Political Ideas and Institutions in Ancient India.

or ( ii ) History of Buddhism.

or (iii) Social History of Ancient India.

### GROUP B—MEDIEVAL INDIA

Paper I (b)—Medieval India (1526-1656 A.D.)

Paper II (b)—Medieval India (1656-1761 A.D.)

Paper III (b)—Either ( i ) Social, Economic and Administrative Institutions of Medieval India.

or ( ii ) Medieval Religion, Art and Architecture.

### GROUP C—MODERN INDIA

Paper I (c)—Modern India (1858-1905 A.D.)

Paper II (c)—Modern India (1906-1950)

Paper III (b)—Either ( i ) Social and Economic History of Modern India.

or ( ii ) History of Ideas and Opinions (Ram Mohan to Gandhi).

Paper IV—Either (a) Essay.

or (b) Philosophy of History.

or (c) History of Marathas from 1712 to 1818

or (d) History of Political Theory.

### DIPLOMA IN INDIAN CULTURE

Paper I—History of Indian Philosophy.

Paper II and III—Any two papers out of the following:—

- (a) Palaeography and Numismatics.
- (b) Development of Indian Art and Architecture.
- (c) Indian Polity.
- (d) Fundamentals of Classical Indian Aesthetics and Literary Heritage.
- (e) Elements of Indian Archaeology (Protohistoric and early historic).
- (f) History of Science in India.
- (g) Ancient History, Culture and Archaeology of Rajasthan.

## APPENDIX 'B'

### ALTERNATIVE SCHEME

#### M.A. Previous Examination of 1972 and Final Examination of 1973

#### M.A. PREVIOUS

Paper I—History of Contemporary Ideas and Movements  
with respect to one of the following :

##### (a) *Contemporary World (1890-1970)*

The emphasis will be on the study of the basic political, social and economic movements and processes in contemporary history and the role of ideas in them.

1. General feature of contemporary History.
2. Self-accelerating revolution in Science, technology and economic life and its impact on society.
3. Imperialism and World War I.
4. Revolution and Communism in Russia.
5. National Resurgence in Asia—Japanese Imperialism Chinese communism.
6. Democracy and Dictatorship in Europe (1919-1945).
7. International Relations and World War II.
8. War and After : Cold War and the threat of Nuclear War, The quest for containment and security : USSR, China and USA in World affairs : the problems of 'developing' societies : space age and its culture.

#### Basic Books

Barracclough : Introduction to Contemporary History.  
Heilbroner; the Making of Economic Society, Ch. VII.  
Gooch : Modern Europe (Home University Library).  
Christopher Hill : Lenin and the Russian Revolution.  
Fitzgerald : Revolution in China.  
New Cambridge Modern History, Vol. XII.  
Carr : International Relations between the two World War.  
J. L. Henderson : Since 1945. Aspects of Contemporary World History.

#### Further Reading

UNESCO History of Mankind, Vol. VI, pt. I, Section II.  
Clough and Cole : Economic History of Europe, Chs.



## XVI, XX.

Moon : Imperialism and World Politics.

Brandenburg : From Bismarck to the World War

Lenin : Imperialism.

Marx and Engels : Communist Manifesto.

Clyde : The Far East Chaps 24, 40 and Supplement II.

Panikkar : Asia and Western Dominance.

DeBary : Sources of Japanese Tradition Ch. XXVII.

Chambers, Bayley and Harris : This Age of Conflict.  
Pt. II, Section 10, 11, 12, 19-21, Pt. III-Section 28-36.

E. D. Burns : Ideas in Conflicts (Political Theories of the Contemporary World).

Schrier etc. (ed). Modern Europe Civilization. Pt. VI—The Age of Anxiety.

(b) *History of England (1760-1945).*

1. First and Second Industrial Revolutions and Social Changes.
2. Role of individualist and utilitarian ideas.
3. Democratisation of the political processes and resultant liberalising and social welfare legislation.
4. Efforts to maintain Balance of power in Europe and monopoly of naval power.
5. Colonialism, imperialism and Commonwealth (including the problem of Canada, Ireland and India).
6. Growth of Trade Unionism and Socialist Movement.

**Basic Books**

Methuens. History of England (Relevant volumes).

Oxford. History of England (Relevant volumes).

Pauline. Gregg. Social and Economic History of Britain.

**Further Reading**

Peter Lane (ed.) : Documents on British Economic and Social History, 3 vols.

Cambridge—History of British Foreign Policy (relevant vols).

Namier : Structure of British Politics.

Halevy : History of the English People in the 19th century.

Albe : History of Utilitarianism.

(c) *History of Europe (1789-1939)*

1. Revolution, the Ancient Regime and its breakdown. Role of Ideas and individuals.
2. The Revolutionary principle, their institutionalization and dissemination under Napoleon.
3. Revolution and Reaction. The growth of national movements.
4. Agrarian and Industrial revolutions—New Social and Economic forces—Liberal and socialist ideas and movements.
5. Imperialism and World Politics.
6. The Russian Revolution.

**Basic Books**

Gershoy : The French Revolution and Napoleon.  
 Thomson : Europe since Napoleon.  
 Birnie : Economic History of Europe (1760-1939).  
 Saunders : Age of Revolution.

**Further Reading**

New Cambridge Modern History, Vols. XI-XII.  
 Gooch : History and Historians in the 19th Century.  
 Clapham : Industrial Revolution in France and Germany.  
 Chamberlain : History of the Russian Revolution  
 Paul Hazard : European Thought in the Eighteenth Century.

**PAPER II—Evolution of the Indian Mind.**

The students will be expected to be familiar with the basic ideas of the leading religious movements and also with the major tendencies in the basic moral, social and political ideas. They will be expected to be broadly familiar with the elements of Indian philosophy.

Vedic and Upanisadic Thought, the Gita and the Mahabharata, Buddhism and Jainism, the six systems, Lokayata, The Arthashastra and the Dharmasastra, Pauranic and tantric thought, Vaishnavism, Saivism and Saktism, the Bhakti Movement saints and acharyas (Alvars to Tulsidas), Sufism, social and religious renaissance and reformation the 19th and 20th centuries (Ram Mohan to Gandhi).

## Basic Books

Hiriyanna : Essentials of Indian Philosophy (in Hindi also).

R.G Bhandarkar : Vaisnavism, Saivism and other minor Religious Systems (In Hindi also).

Indian Culture Heritage (Ram Krishna Mission).  
D.S Sharma : Hindu Renaissance.

## Further Reading

Buddhism (Patiala, 1969).

Elliot : Hinduism and Buddhism, 3 vols.

Radhakrishnan (ed.) : History of Philosophy, East and West.

U.N. Ghosal : History of Indian Political Ideas, Vol. I.

Farquhar : Modern Religious Movements in India.

Carpenter : Medieval Indian Theism.

## Paper III—Evolution of Indian Society.

1. Formative Phase (upto Circa 400 B.C.). Emergence of the traditional pattern—Character and factors.
2. Age of Formulation and Formalisation (400 B.C. to 700 A.D.) Formulation of social ideas and norms and the definition of social institutions and laws in the Dharmasastras and the Puranas—Expansion and refinement of Indian Society—Syncretism, Schematism and ritualisation.
3. Growth of Imbalance (700 A.D. to 1200 A.D.)—The emergence of Hindu Society—sources and factors—age of faith and scholasticism—The extent and role of feudal institutions.
4. Rigidity and Fragmentation (1200 A.D. to 1800 A.D.)—General features—attempts at reform—aristocratic refinement and demoralisation—Social insecurity.
5. Age of Transformation (19th and 20th centuries)—The new challenges—forces and movements of reform—growth of new social consciousness.

## Basic Books

- Prabhu : Hindu Social Organisation.  
 Kane : History of the Dharmasastra.  
 Jolly : Hindu Law and Custom. Vol. II & III.  
 Ghurye : Caste and Class in India.  
 R.C. Majumdar : India as described by Classical Writers  
 Sachau : Alberuni's India, Vol. II, pp. 130-133  
 Dubois : Hindu Life, Manners and Customs.

## Further Reading

Cambridge History of India, Vol. I, Ch. 4, 5, 8, 13, 16, 19.

Ficke : Social Organisation in North Eastern India in Buddha's time.

Hopkins : Jaos 1888 : Social and Military position of the Ruling Caste in the Epics.

- Vijay Bahadur Rao : Uttar Vedic Samaj.  
 A.N. Bose : Social and Rural Economy of Northern India.  
 Motichand : Sarthvaha.  
 Chaklader, H.C. : Social Life in Ancient India.  
 Sudhakar Chattopadhyaya : Social Life in Ancient India.  
 R.K. Mookerji : Education in Ancient India.  
 A.S. Altekar : Position of Women in Hindu Civilization  
 Warmington : The Commerce Between the Raman Empire and India.  
 B.N Sharma : Social Life in Northern India 500-1000 A.D.  
 Lallanji Gopal : Economic Life in Northern India.  
 K.M. Ashraf : Life and Condition of the People of Hindustan.  
 Moreland : India at the Death of Akbar.  
 G.N. Sharma : Social Life in Medieval Rajasthan.  
 V.P.S. Raghuvanshi : Indian Society in the 18th Century.  
 R.C. Dutta : Economic History of India.  
 B.B. Misra : The Indian Middle Classes.  
 H.N. Srinivas : Social Change in Modern India.

Paper IV—A special paper out of one of the following :

### (a) *Theories of Society and Culture*

1. Positivistic Concept and Methods of Sociology : Comte and Durkheim; Weber and Historical Soci-

ology; Mannheim and the Sociology of knowledge; Parsons and General Sociological Theory.

2. Tylor and the beginning of cultural Anthropology : Kroeber—Cultural Configurations : Sorokin—Cultural Dynamics—Cassirer and the Philosophical Approach.
3. Influence of Marxism and Psycho analysis—Economic Science and Economic History—Archaeology and Cultural origins.

### Basic Books

Mitchell : Hundred Years of Sociology.  
 Penniman : Hundred Years of Anthropology.  
 Sorokin : Contemporary Sociological Theories.

### Further Reading

Founding Fathers of Social Science (Polican).

H.E. Barns (ed.) : An Introduction to the History of Sociology.

Gurwich and Moore (ed.) : Twentieth Century Sociology.  
 Ruth Benedict : Patterns of Culture.  
 Herskovitz : Cultural Anthropology.  
 Graham Clark : Archaeology and Society.  
 Piggott : Approach to Archaeology.  
 Gordon Childe : What Happened in History.  
 Gordon Childe : Hundred Years of Archaeology.  
 Yashdev Shalya : Sanskriti.

### (b) *Political Theories*

(Political ideas in the ancient Near East, China and India; Plato, Aristotle, St Thomas, Aquinas, Hobbes, Locke, Rousseau, Hegel, Mill, Marx, Green, Laski, the impact of positivistic social science; behaviour analysis; sociology of politics).

### Basic Books

Sabine : History of Political Theory.  
 Catlin : History of Political Philosophers.  
 Finer : Theories and practice of Modern Governments.

Morgenthau : Politics Among Nations.

### Further Reading

Lord : Introduction to Politics.  
 Laski : Introduction to Politics.  
 Plato : Republic.  
 Aristotle : Politics.  
 Mill : On Liberty.  
 Marx and Engels : Communist Manifesto.  
 H.E. Barnes : History of Sociology.  
 Founding Fathers of Social Science (Pelican).

### (c) *Archaic Civilizations (Egypt, West, Asia, Crece, India)*

#### Books Recommended

Ruth Benedict : The Patterns of Culture.  
 H. Frankfor : The Birth of Civilization in the Near  
 —do— East. History of Art and Architecture  
 in the Near East.  
 Gordon Childe : What Happened in History.  
 Breasted : The Conquest of Civilization.  
 Breasted : Ancient Egyptian Religion.  
 Turner : Cultural Traditions. 2 vols.  
 Glotz : Aegean Civilization.  
 Alchins : The Birth of Civilization in India.

### (d) *Groece-Roman Civilization*

#### Books Recommended

Bury : History of Greece.  
 Mommsen : History of Rome.  
 Gibbon : Decline and Fall of the Roman Empire.  
 Will Durant : Life of Greece.  
 Will Durant : Caesar and Christ.  
 A.H.M. Jones (ed.) : A History of Rome Through the  
 Fifth Century. 2 vols.  
 Herodotus : Histories.  
 Plutarch : Lives of Noble Greeks and Romans.  
 Tacitus : The Germans.  
 The new Testament.  
 St. Augustine : The City of God.  
 Breasted : Conquest of Civilization.

### (e) *Chinese Civilization*

Lin Yu-tang : Wisdom of China.  
 Legge : Chinese Classics (Analects of Confucius).  
 Fitzgerald : China.  
 Granet : Chinese Civilization.  
 Fung-yu-lan : History of Chinese Philosophy.  
 Creel : The Birth of China.  
 Creel : History of Chinese Thought.

(f) *History of Science*

### Basic Books

J. D. Bernal Science in History. 4 vols.

### Further Reading

Needham : Science and Civilization in China.  
B.N. Seal : Politive Sciences of the Ancient Hindus.  
H. Hodges : Technology in the Ancient World.  
B. Farrington : Greek Science.

(g) *Medieval European Civilization (476-1492)*

### Books Recommended

Will Durant : The age of Faith.  
 Marc Bloch : Feudal Society. 2 vols.  
 Eileen Power : Medieval People.  
 H. Pirenne : History of Europe from the Invasions to  
                   the Sixteenth Century.  
 Huizinga : The Wanning of the Middle Ages.  
 Gibbon : The Decline and fall of the Roman Empire.  
 agley : Historical Interpretations—Sources of English  
           Medieval History.  
 David Herliny (Ed.) : Medieval Culture and Soc ety.3  
                                   Vols.

(h) *Elements of the History of Religion*

### Books Recommended

Kellett : A Short History of Religion.  
 Korsten : The Origins of Religion.  
 Breasted : The Development of Religion and Thought in  
 Egypt.  
 Harrison : Prolegomena to the Studies of Greek Religion  
 Soothill : Three Religions of China.

Carpenter : Christianity.

Conze : The Essence and Development of Buddhism.

### M.A- FINAL

Paper I—Historiography and the Philosophy of History.

#### Books Recommended

E.H. Carr : What is History ?

W.H. Walsh : An Introduction to the Philosophy of History.

Collingwood : Idea of History.

V.S. Pathak : Ancient Indian Historians.

G.B. Burns : Ancient Greek Historians.

G.P. Gooch : History and Historians the 19th Century.

Paper II—Advanced Indian History with respect to one of the following :

- (a) *History of Ancient India, Sources, Problems and Interpretations (350 B.C.-650 A.D.)*

#### Basic Books

Pargiter : Dynasties of the Kali Age.

Arthasastra (Shamasastry).

R.B. Pandey : Asok ke Abhilekh.

R.C. Majumdar : Ancient India as described by Classical Writers.

Periplus of the Erythraen Sea.

Fleet. Gupta Inscriptions.

D.C. Sircar, Select Inscriptions Vol I.

Lahiri : Indo-Greek Coins.

#### Further Reading

A. Nilkantha Sastri (ed.) : Comprehensive History of India Vol. II.

Raychaudhari H.C. : Political History of Ancient India.

Bhandarkar, D.R. : Asoka (also in Hindi).

R.C. Mookerjee : The Gupta Empire.

S.R. Goyal : A History of the Imperial Guptas.

G.S. Chatterji : Harshavardhan (in Hindi also).

- (b) *History of Medieval India, sources, Problems and Interpretations (1200-1761 A.D.)*

#### Basic Books

Elliot and Dowson : History of India as told by its own Historians, Vols. II, III, IV, V and VII.



Rizvi : Source Book of Medieval Indian History in Hindi. Vols. II-VII.

Abul Fazl : Akbarnama.

Abul Fazl : Ain-i-Akbari. Tr. by Blochmann.

Memories of Jahangir, Tr. by A. Roger (Hindi tr. by Munshi Devi Prasad).

Tavernier : Travels in India (Ed. by V. Ball).

Berner : Travels in the Mughal Empire. Ed. by Constable (Also in Hindi).

Manucci : Storia de Mogor, 4 vols. (Ed. by W. Irvine).

### Further Reading

Habibullah : Foundation of Muslim Rule in India.

Ishwari Prasad : History of Aurangzeb in India.

R.C. Majumdar (Ed.) : Sultanate of Delhi (Vidya Bhawan Series).

M. Habib and Asfer Jahan : Political Theory of the Delhi Sultanate.

Habib (Ed.) : A Comprehensive History of India Vol. V.

A.B. Pandey : The First Afghan Empire in India.

Sharma, G.N. : Mewar and the Mughal Emperors.

Rush Book Williams : An Empire Builder of the Sixteenth Century (S. Chand & Co., New Delhi).

Ishwari Prasad : Humayun in his Times.

Qanungo : Sher Shah and his Times.

Srivastava, A.L. : Akbar the Great. Vols. I-II.

Beni Prasad : Jahangir.

Saxena B.P. : Shah Jahan.

Sarkar, J.N. : History of Aurangzeb. Vols. I-V.

Sarkar, J.N. Shivaji and his Times.

(c) *History of Modern India, Sources, Problems and Interpretations (1772-1950).*

### Books recommended :

G.S. Sardesai : Main Currents of Maratha History.

History and Cultures of the Indian People. Vols. IX, X, and XI.

Michael Edwards : British India.

S. Gopal : The Viceroyalty of Lord Ripon.

Hutchinson : The Illusion of Permanence.

S. Gopal : British Policy in India.

Philips : Historians of India, Pakistan and Ceylon.

Philips : Select Documents (1858-1947).

The students will be expected to be able to critically discuss problems of interpretation relating to the political, social, economic and cultural developments of the period in the

back-ground of general history and acquaintance with select documents.

PAPERS III & IV—Two papers out of any one of the following specialization groups :

GROUP A—*Ancient Indian Civilization and Philosophy*

Paper I—Either (a) *History of Education, Learning and Literature*.

#### Books Recommended

- C.S. Upasaka : Asokan Brahmi.
- Raj Bali Pande : Asoka ke Abhilekh (Hindi).
- Fleet : Corpus Inscriptionum Indicarum. Vol. III.
- Hultsch : Croups Inscriptionum Indicarum Vol. I.
- Winternitz : History of Indian Literature.
- Keith : Classical Sanskrit Literature.
- Krishna Chaitanya : A New Story of Sanskrit Literature.
- Altekar : Education in Ancient India.
- R.K. Mookerjee : Ancient Indian Education.
- Macdonell : History of Sanskrit Literature.
- Aurobindo : Fundamentals of Indian Culture.

Or (b)—*Ancient Indian Art, Architecture and Iconography*.

#### Books Recommended

- Coomaraswamy, A.K. : A History of Indian and Indonesian Art.
- Smith, V.A. : Fine Arts in India and Ceylon. Oxford, 1930.
- Rowland, B. : The Art and Architecture of India. Baltimore, 1959.
- Brown, P. : History of Indian Architecture (Buddhist and Hindu).
- Brown, P. : Indian Painting.
- Benerjee, J.N. : Development of Hindu Iconography.
- Gopinath Rao, T.A. : Hindu Iconography. 4 vols.
- Bhattacharya, B. : Buddhist Iconography.

Or (c)—*History and Philosophy of Buddhism*

#### Books Recommended

- Thomas : History of Buddhist Thought.
- N. Dutt : Early Monastic Buddhism.
- G.C. Pande : Buddha Dharma Ke Vikas ka Itihas. (In Hindi).
- P.L. Narasu : The Essence of Buddhism.
- Coomaraswamy and I.B. Horner : Living Thoughts of Gotama, The Buddha (Introduction by Coomaraswamy).

G.C. Pande : Studies in the Origins of Buddhism.  
 Stecherbatsky : The Central Conception of Buddhism.  
 Rahul Sankrityayana : Buddha Darshan.

Or (d)—*History of Political Ideas and Institution.*

#### Books Recommended

K.P. Jayaswal : Hindu Polity.  
 Altekar : State and Government in Ancient India.  
 Saleatore : Ancient Indian Political Thought and Institutions.  
 V.P. Varma : Studies in Hindu Political Thought.  
 Kangle : The Kautilya Arthashastra.  
 N.C. Bandhopadhyaya : Development of Hindu Polity and Political Theories.

Paper II—Either (a) *Epigraphy and Numismatics.*

#### Basic Book

Raj Bali Pande : Ashok ke Abhilekh (Hindi).  
 Fleet : Corpus Inscriptionum Indicarum. Vol. III—Gupta Inscriptions.  
 Allan : A Catalogue of the Indian Coins in the British Museum, Catalogue of the Coins of Ancient India  
 Altekar : Corpus of Indian Coins. Vol. IV.

#### Books Recommended

Hultzsch : Corpus Inscriptionum Indicarum. Vol. I.  
 Sirçar, D.C. : Select Inscriptions, Vol. I.  
 Whitehead : Catalogue of Coins in the Punjab Museum, Lahore. Vol. I—Indo—Greek Coins.  
 Allan : Catalogue of the Coins of the Gupta Dynasty and Sasank King of Ganda.  
 Altekar : Gupta Kalina Mudrayen (Hindi).  
 Ojha : Pracheen Bhartiya Lipimala.  
 Gardner : Catalogue of Coins in the British Museum, Calcutta. Vol. I.  
 Buhler : Indian Paleography (In Hindi also).  
 Rapson : Ancient Indian Coins (In Hindi also).

Or (b)—*Archaeology (including Field Archaeology).*

#### Basis Books

Allchin : The British of Indian Civilization.  
 Wheeler : The Indus Valley Civilization.  
 Wheeler : Early India and Pakistan.  
 B.R. Lal : Indian Archaeology since Independence.

#### Books Recommended

G.R. Sharma : Excavations at Kausambi.

Indian Archaeology, a Review.  
Ancient India—relevant portions.

Or (c)—*History of Science and Technology*.

P.C. Ray : Hindu Chemistry.  
B.N. Seal : Positive Sciences of the Ancient Hindus.  
Betty Heimann : Facets of Indian Thought.  
S.N. Das Gupta : History of Indian Philosophy (Relevant portions).

Muni Sri Nagraj : Jain Philosophy and the Modern Science.

Mrs. Rhys Davids : The Birth of Indian Psychology and its Development in Buddhism.

A.N. Singh & B.B. Datta : Hindu Mathematics.

Gorukh Prasad : Bhartiya Jyotisha.

Scherbatsky : Buddhist Logic I.

Or (d)—*Greater India*.

### Books Recommended

B.C. Majumdar : Hindu Colonies in the Far East.

P.C. Bagchi : India and Central Asia.

Legge : Fa-Hien.

Watters : Yuan Chwang.

Takakusu I—tsing.

### GROUP B—*Medieval Civilization*.

Paper I—Either (a) *Religious and Cultural History of Medieval India (1200-1800)*

Nicholson : The Mystics of Islam.

Ray Chaudhary, M.L. : Din-i-Ilahi.

Sharma, S.R. Religious Policy of the Mughal Emperors.

Carpenter : Medieval Indian Theism.

Ashraf, K.M. : Life and Condition of the People of Hindustan.

R.C. Majumdar (Ed.) Sultanate of Delhi (Vidya Bhawan Series).

Dutta, R.C. : Later Hindu Civilization. Calcutta 1907.

Law, N.N. : Promotion of Learning in India during Mohammadan rule by Muhammadans. (London. 1916)

Tara Chand : Influence of Islam of Indian Culture.

Yusuf Hussain : Glimpses of Medieval Indian Culture.

Nizami : Some Aspects of Religion and Politics in India during the 13th century.

P.N. Chopra - Some Aspects of Society and Culture during the Mughal Age.

Tapa Ray Chaudhuri: Bengal under Akbar and Jahangir.

Ranade : Pathways to God.  
 Farquhar : Outline of the Religious Literature of India.  
 History of Hindi Language.  
 Misra Bandhu Vinod : Ramananda.  
 Westcott : Kabir and Kabir Panth.  
 K. Mohan Sen : Kabir.  
 Macauliffe : The Sikh Religion.  
 Ranade : Maratha Mysticism.  
 Sudhakar Dwivedi : Dadu Dayal ki Bani.  
 Wilson : The Sects of Hindu.  
 Bhattacharya : Hindu Caste and Sects.  
 J. Sarkar : Chaitanya.  
 Sharma, G.N. : Social Life in Medieval Rajasthan.

Or (b) *Economic Life and Administrative Institutions of Medieval India (1200-1800)* :

(i) **Economic History :**

Irfan Habib : Agrarian System of the Mughals.  
 Kulshreshtha : Trade and Industry under the Mughals.  
 Moreland : Agrarian System of Muslim India.

(ii) **Administrative Institution :**

Tripathi, R.P. : Some Aspects of Muslim Administration.  
 Quarashi, I.H. : Administration of the Sultanate of Delhi.  
 Day, U.N. : Administrative System of the Delhi Sultanate.  
 Prof. Habib, and A. Jahan : Political Theory of the Delhi Sultanate.  
 Ibn Hasan : Central Structure of the Mughal Empire.  
 J.N. Sarkar : Mughal Administration  
 Sharma : Mughal Administration.  
 P. Saran : Provincial Government of the Mughals.

Or (c) *History of Medieval Indian Architecture and Painting* :

**Books Recommended :**

Percy Brown : Indian Architecture (Islamic Period).  
 Havell : Indian Architecture.  
 Cambridge History of India, Vols. III-IV. Chapters on Arts and Architecture.  
 Cultural Heritage of India. Vol. III—Chapters on Arts and Architecture.  
 Percy Brown : Mughal Painting.  
 Coomaraswami : Rajput Painting.  
 Lalit Kala Akademi : Mughal Miniatures.  
 Coomaraswamy, A.K. : History of Indian and Indonesian Art.  
 Fergusson : History of Indian and Eastern Architecture.

Latif, S.M. : Agra, Historical and Descriptive.  
 Smith, V.A. : A History of Fine Art in India and Ceylon.  
 Fanshawe : Delhi, Past and Present.  
 Lalit Kala Akademi Series of Rajput Paintings.

PAPER II—Either (a) *History and Historiography of Rajasthan. (Kumbha to Sawai Jai Singh).*

**Books Recommended :**

Tod : Annals and Antiquities of Rajasthan (Also in Hindi).  
 Shyamaldas : Vir Vinod.  
 Ojha : History of Rajasthan. All Volumes.  
 Sarda : Maharana Kumbha.  
 Reu : History of Marwar,  
 Sharma, G.N. : Marwar and the Mughal Emperors.  
 Sharma, M.L. : Kotah Rajya Itihas. Vo's. I-II.  
 Reu : Glories of Marwar and the Glorious Rathores.  
 Nensi-ri-Khyat,  
 Bankidas ri Khyat.  
 Dasharatha Sharma : Lectures on Rajput History and Culture.

Or (b) *Social and Cultural History of Rajasthan.*

**Books recommended :**

Tod : Annals and Antiquities of Rajasthan (Relevant Portions.)  
 G.N. Sharma : Social Life in Medieval Rajasthan.  
 Vaidya, C.V. : History of Medieval Hindu India. Vols.

I-III. (Relevant portions).

The History and culture of India, Vol. VI (Relevant portions).

Qanungo : Rajput Studies,  
 Rajasthan Paintings (Lalit Kala Akademi Series).  
 Dasharatha Sharma : Early Chauhan Dynasties (Relevant aspects of society and culture.)  
 Ganguly, D.C. : History of the Parmar Dynasty.

Rajasthan Through the Ages. Vol. I (Social and Cultural aspects only )

GROUP C—*History and Culture of Rajasthan :*

PAPER I—*Sources of Rajasthan History :*

**Books Recommended :**

Nensi's Khyat. Vols. I—IV. (Rajasthan Oriental Research Institute, Jodhpur).

Nensi : Marwar-ri pargana-ri-vigat, Vols, I-II.

Dayasdas ri Khyat.

Bankidas ri Khyat (R.O.R.I. Jodhpur).

Fklinga Mahatmya, Ajitodaya, Amarsar and Rajvallabh.

Kanhade Prabandha,

Achaldas Khichi ri Vachnika.

Suraj Prakash. Vols. I-II.

Raj Rupak.

Sharma, G.N. : A Bibliography of Medieval Rajasthan.

Sharma, G.N. : Rajasthan Studies.

Vir Vinod. Relevant sources.

Elliot and Dowson : History of India as told by its own  
Historians. Vols. I—VIII (Relevant  
portions.)

A Historical Study of Inscription—Kumbhalgarh Incriptions, Chittor Inscription, Rai Singh Inscription, Raj Prashasti.

A Historical Study of Archival Records—Portfolio Files.  
Dastur Kamwar, Toji Records, Haqiqat Bahis, Akhbarats.

Paintings as a source of study—Lalit Kala Akademy,  
Publication.

PAPER II—Either (a) *Political History of Rajasthan (Kumbha to Sawai Jai Singh)*.

#### Books Recommended :

Tod, Annals and Antiquities of Rajasthan (Also in Hindi).

Shyamaldas : Vir Vinod.

Ojha : History of Rajasthan. All volumes.

Sarda : Maharana Kumbha.

Reu : History of Marwar.

Sharma, G.R. : Mewar and the Mughal Emperors.

Sharma, M.L. : Kotah Rajya Ka Itihas Vol. I—II.

Reu : Glories of Marwar and the Glorious Rathores.

Nensi ri Khyat.

Bankidas ri Khyat.

Dayaldas ri Khyat.

Dashartha Sharma : Lectures on Rajput History and  
Culture.

Or (b) *Social and Cultural History of Rajasthan :*

#### Books Recommended

Tod : Annals and Antiquities of Rajasthan (Relevant  
portions).

G.N. Sharma : Social Life in Medieval Rajasthan.

Vaidya, C.V. : History of Medieval Hindu India Vols.

I-III. (Relevant portions).

The History and Culture of India. Vol. VI. (Relevant portions).

Qanungo : Rajput Studies.

Rajasthan Paintings (Lalit Kala Akademik Series).

Dashartha Sharma : Early Chauhan Dynasties (Relevant aspect of Society and Culture.)

Ganguly, O.C. : History of the Parmar Dynasty.

Rajasthan Through the Ages. Vol. I (Social and Cultural aspects only.)

GROUP D—*Modern Indian Society and Thought*

PAPER I—Either (a) *History of Ideas and Opinions (Ram Mohan to Vivekanand).*

Books Recommended

Morrison, J. : New Ideas in India during the 19th century.

Collet. S.D. : Life and Letters of Raja Ram Mohan Roy

Ghose, Aurobindo : Bankim, Tilak and Dayananda.

Roman Rolland : Life of Vivekanand.

D.G. Karye : Ranade.

T.V. Parvate : Gokhale.

S. Wolpert : Tilak and Gokhale.

E. Stokes : The English Utilitarians and India.

Iqbal Singh : Ram Mohan Roy.

R.P. Masani : Dadabhai Naoroji.

Max. Muller : Ram Krishan.

Ghosh : Studies in Bengal Renaissance.

B.B. Majumdar; Ram Mohan to Dayanand.

Or (b) *History of Ideas and Opinions (Tilak to Nehru).*

Books Recommended

Narendra Dev : Socialism and the National Revolution

Paravate, T.V. : Lokmanya Tilak.

Brecher, M. ; Nehru—a Political Biography.

J.B. Kriplani : Gandhi his life and thought (Part II only).

Gandhi : Hind Svaraj

Nehru : Discovery of India.

PAPER II—Either (a) *Freedom Movement and Constitutional Development upto 1900.*

Books Recommended

Majumdar and Majumdar : Congress and Congressmen in the Pre-Gandhian Era. (Chapters. 1, 3, 4 and 6).



D. Aggoy : Moderates and Extremists in the Indian Nationalist Movement. Chs. 1, 2, 3.

Keith : Constitutional History of India.

A.C. Banerjee : Indian Constitutional Documents. Vol. I-II.

S.B. Chowdhry : Theories of the Indian Mutiny.

R.C. Majumdar : History of the Freedom Movement. Vol. I.

K K. Datta : Kanwar Singh

P. C. Gupta : Nawab Sahib and the rising at Kanpur,

V.S. Savarkar : The Indian War of Independence.

S.B. Chowdhry : Civil Rebellion

Marx and Engels : The First Indian War of Independence.

Or (b)—*Social and Economic History of Nineteenth Century India.*

#### Books Recommended

Gadgil : Industrial Evolution of India.

R.C. Dutt : Economic History of India. 2 vols.

B.B. Misra : The Indian Middle Classes.

A.R. Desai : Social Background of Indian Nationalism. (Relevant chapters only.)

Dadabhai Naoroji : Poverty and Un-British Rule in India.

William-Digby : Prosperous British India.

Tara Chand : History of the Freedom Movement in India. Vol. II. Chapters 3, 7, 9 and 10.

N.K. Sinha : Economic History of Bengal. 3 vols.

Or (c)—*National and Constitutional Development (1905-65)*

#### Books Recommended

A.C. Banerjee : Indian Constitutional Documents. Vols. II-III.

M.V. Pylee : Constitutional Government in India.

P.D. Kaushik : The Congress, Ideology and Programme, 1917-47.

R.C. Majumdar : History of the Freedom Movement. Vol. II-III.

V P. Menon : Transfer of Power.

Amba Prasad : Nineteen Forty-two.

A. Tripathi : The Extremist Challenge (Chs. I-IV).

Philips, Singh and Pandey : The Evolution of India and Pakistan Section II only.

Or (d)—*Social and Cultural History Since 1900.*

#### Books Recommended

D.P. Mukerjee : Modern Indian Culture.

R.C. Majumdar : Struggle for Freedom,

S.B. Singh : Nationalism and Social Reform.  
 S. Netarajan : A Century of Social Reform in India.  
 M.N. Srinivas : Social change in Modern India.

GROUP E—*Modern West*

PAPER I—Either (a)—*History of Russia (1860-1960)*

Books Recommended

Summer : Survey of Russian History.  
 Vernadski : History of Russia.  
 Riasanovsky, Nicholas V : A History of Russia (O.U.P.).  
 Christopher Hill : Lenin and the Russian Revolution.  
 Pares, B. : History of Russia (London).  
 Rauch, G.V. : A History of Soviet Russia (London).  
 Harcave; Sidney : Russia—a History (London).

Or (b)—*History of U.S.A. (1776-1945)*

Books Recommended

Morrison and Commager : The Growth of American Republic.  
 J. Halle : Civilization and Foreign Policy of America.  
 Harvey Wish : Contemporary America.  
 Max Lerner : American as a Civilization.  
 F.J. Turner : Frontier and Section (Ed. by R.A. Billington).  
 G.B. Parkes : The United States of America—a History. (Indian Edition).

Or (c)—*British Constitution History (1603-1950)*

Books Recommended

Maitland : Constitutional History of England.  
 Adams : Constitutional History of England.  
 Keith : Constitutional History of Modern England.  
 J.A.R. Marriott : English Political Institutions.

PAPER II—Either (a) *Political Theory from Rousseau to the Present Day.*

Books Recommended

Dunning : A History of Political Theories. Vols. II-III.  
 Laski : An Introduction to Politics.  
 Barker : Political Thought in England (1848-1914).  
 Foster and Jones : Masters of Political Thought (Relevant parts).  
 Joad : Guide to the Philosophy of Moral Politics.  
 Sabine : History of Political Theory.  
 Green : Principles of Political Obligation.

Bosanquet : Philosophical Theory of the State.  
Catlin : Political Philosophers.

Or (b)—*History and Theory of International Relation* (1920–70).

#### Books Recommended

Palmer and Perkins : International Relations.  
Schuman, F.L. : International Politics.  
Morgenthau Hans : Politics among Nations.  
Herz, J.H. : International Politics in the Atomic Age.  
Wright, Quincy : The Study of International Relations.  
Frendmans, W : An Introduction to World Politics.  
S.N. Dhar. : International Relations and World Politics since 1919.

## APPENDIX VIII

(Ref :-Faculty of Arts Res. No 21 of 10-2-71)

Minutes of the Meeting of the Board of Studies in Public Administration held on 14th September, 1970 at 12 noon at the University office, Jaipur.

## Present

1. Shri Ziauddin Khan (Convener)
2. Dr. V.M. Sinha
3. Dr. C.P. Bhambhri
4. Dr. Kuldeep Mathur
5. Shri T.N. Chaturvedi
6. Shri K.D. Trivedi (Special invitee)

1. Under Section 34 (4) (iv) of the University Act, the Board elected Dr. V.M. Sinha as a member other than the Convener of the Board of Studies to serve on the Committee for Selection of examiners in the subject for the year 1971.

2. The Board offered no comments, after going through the reports of examiners and questions paper set for the examination of 1970.

3. The Board scrutinised the statements of qualifications and teaching experience etc. of teachers (received from University Teaching Departments, University Colleges, affiliated institutions and other Universities) for inclusion in the revised panel of examiners for 1971 and revised the panel accordingly.

4. The Board considered a complaint dated the 16th May, 1970 received from candidates through Associate Dean, University Studies in Arts, Jaipur against the question paper II of III year T.D.C. (Arts) (1967 Revised) examination, along with the remarks of the papersetter, to whom a reference was made.

The Board was satisfied with the paper setter's explanation.

5. The Board considered a complaint dated 23-4-70 received from candidates through Head of the University

Department of Public Administration. Jaipur against the question paper III (Section C) of M.A. (Final) Public Administration examination along with the remarks of papersetter, to whom a reference was made.

The Board resolved that no action was necessary, because the examiner had noted the discrepancy in Hindi and English while evaluating the answer-books.

6. With reference to the Faculty of Arts Resolution No. 17 dated 3rd February, 1970 the Board suggested the following draft amendment to the Statutes, Ordinances and Regulations for instituting Diploma Course in Public Administration :

S. 40 : Add Diploma in Public Administration.

S. 121 : Add the following under the heading—Faculty of Arts :

‘Diploma in Public Administration’.....Rs. 40/-

S. 123 : Add—‘Diploma in Public Administration’ in Para (A) of the Statute which lays down remuneration for M.A., M.Sc., M.Com. and other Diploma course examination, so that remuneration to Paper-setter and examiners will be the same as for Diploma Course in Indian Culture.

Introduce the following new Ordinance.....

Diploma in Public Administration.

“ A candidate who after passing the Bachelor’s Degree examination in Arts/Science/Commerce of the University or of any other statutory Indian University recognised for the purpose by the Syndicate, has completed a regular course of study for one academic year shall be admitted to the examination for the Diploma in Public Administration.”

Introduce the following new Regulation

Diploma in Public Administration.

First Division	60%	} of the aggregate marks.
Second Division	48%	

All the rest in IIIrd Division if they obtain minimum pass marks viz, 36%, in each paper.

There shall be six papers each of three hours durations and each carrying 100 marks.

Paper I—Administrative Principles and Theories.

Paper II—Indian Administration.

Paper III—Personnel Administration.

Paper IV—Financial Administration.

Paper V—Organisation and Management.

Paper VI—Development Administration at State and Local level.

(Refer Appendix H (Page—10) for detailed Syllabus).

Minimum requirements for starting Diploma Course in Public Administration in Affiliated Colleges.

#### Teaching staff :

The teachers should possess the same qualifications as are prescribed for the teachers for M.A. Course in Public Administration. The strength of teaching staff be determined by keeping the following factors in view :

- (g) The maximum work-load permissible under the University Ordinances.
- (b) 6 period each of 45 minutes duration per week per paper are prescribed.

#### Library :

Recurring Grant : Rs. 5/-per student subject to a minimum of Rs. 1,000/-.

Non-recurring : Rs. 5,000/-p.a.

Besides this the Library should subscribe regularly the important journals in the discipline, such as :

1. Indian Journal of Public Administration.
2. University Studies in Public Administration.
3. Public Administration Review—U.S.A.
4. Public Administration Review—U.K.

The meeting was adjourned at 2.30 p.m. and it was agreed to meet again on the next day i.e. Thursday the 15th September, 1970.

Sd/-Ziauddin Khan  
Convener

Minutes of the Adjourned meeting of the Board of Studies in Public Administration held on 15th September, 1973 at 12 noon.

### Present

1. Shri Ziauddin Khan (Convener)
2. Dr. V.M. Sinha
3. Dr. C.P. Bhambhri
4. Dr. Kuldeep Mathur
5. Sh. Krishan Kumar Murani
6. Sh. K.D. Trevedi
7. Sh. T.N. Chaturvedi

7. The Board recommended courses of Study and text books in Public Administration for the following examinations together with changes in Regulations and Ordinances, if any :—Vide Appendix 'B'

B.A. Pass First year Examination of 1972

B.A. Pass Second year Examination of 1973

B.A. Final year Examination of 1974

M.A. Previous Examination of 1972 and }  
M.A. (Final) Examination of 1973 }

B.A. (Honours) Part I Examination of 1973

B.A. (Honours) Part II Examination of 1974

No suggestions from the teachers in the subject were received by the Board for consideration.

8. The Board considered the following suggestions of the Vice-Chancellor made by him in consultation with the Convener of the examinations Reforms Committee —

- A. Regarding award of Sessional marks, these may be awarded on the basis of Articulation, Comprehension and Objective Tests of the Students as per details given below :—

### *Articulation—4 Marks*

Each student may be required to write at least one essay on the subject each term. This may be assessed by 2 independent teachers independently and marks recorded. Marks may be declared publicly and if any student feels aggrieved he may explain why that particular award given.

### *Comprehension—3 marks*

A Test may be conducted each term to examine whether the students have picked up the appropriate expression, and have understood the subject matter.

### *Objective Test—3 marks*

Under this category marking may be done but the marks may not be shown to the candidate. But the solution may be written by the teacher and posted on the notice board so that the students may know the correct answers. If this rational basis is adopted there is a change of increasing the quantum of internal assessment.

B. As regards syllabus at the Post-graduate level I suggest that :—

- ( i ) a list of full and half courses may be prepared according to the availability of teaching competence.
- ( ii ) it may be possible for a student to offer two full courses as a topic to give specialisation in that topic. Such a student would prepare himself for research in this topic.
- ( iii ) student who wishes to learn the subject for becoming a teacher, he may offer 4 half courses covering a variety of topics to have an extensive view of the subject. In fact the students may have to choose one full and two half courses.



C. For very few bright students it may be suggested that they may be encouraged to do some self-study on pre-assigned topics which are not included in their curriculum and they may be assessed entirely on that as far as sessional marks are concerned.

(a) the Board referred the matter regarding the award of sessional marks to the Departmental Committee and it has felt that the old practice should continue as it would be difficult to allocate the marks when the assignment for Sessional marks in each paper is only 10. The Sessional marks are allotted on the basis of the following procedure :—

(i) One term paper in each subject (ii) One Mid-session examination in all the compulsory and optional papers : Both the term papers and the Examination Answer books are evaluated by two examiners. The average of the two is regarded as the final allocation.

(b) With regard to the syllabi in (full and half courses) at the post-graduate level the Department Committee to which the matter was referred by the Board has found that the adoption of the full and half courses may not be feasible as ours is a small staff.

(c) With regard to the suggestion for half study to be made available to bright students, the Departmental Committee to whom it was referred feel that it may be adopted whenever it discovers a bright student opting for it.

9 It was reported that the Academic Council, vide its Resolution No. 35 dated 21.4.70 accepted the following draft resolution proposed by Dr. Dayakrishna, Chairman, Examination Reforms Committee vide his letter No. Acd/jc.1082 dated 17.4.70 as a result of discussion in the meeting of the Examination Reforms Committee held on 17th April, 1970 :—

“Resolved that in the interest of raising standards of teaching and examinations and award of degrees the Board of Studies may prepare alternative Schemes of courses and examination in their respective subjects to be implemented as early as possible.”

The Board was informed that the Departmental Committee to which the matter was referred had appointed a Sub-Committee to prepare alternative Scheme of courses. As the report was awaited, it was recorded that it would be taken up Sometime later.

10. The Board considered a letter of Dr. V.M. Sinha, regarding the objections raised by him with regard to the procedure adopted for re-examination by the University after the examinations of 1970.

The Board considered the letter and found that it had two aspects : (a) Legal and (b) the appointment of examiners.

The legal aspect of Sec, 34 (2) may be examined by Legal Expert and amendment if necessary be made with regard to the appointment of examiners for re-examination. It is suggested that the names of alternative examiners may be selected for the re-examination also at the time of preparing the list of examiners for the year.

On the whole the Department Committee to which the matter was referred thought that dual evaluation of each paper particularly at post-graduate level would be better substitute for re-examination.

**Sd/-Ziauddin Khan**

*Convener*

**B.A. First Year Examination****Public Administration**

Paper—3 hours duration 100 marks.

Paper I—Central Administration : Theory and Practice.

**B.A. Second Year Examination****Public Administration**

There shall be two papers of 3 hours duration each carrying 100 marks.

Paper I—*Administration Institutions* :

Concept of laissez faire state, Modern Welfare State, Administrative State.

Modern Democratic Administration, role of Bureaucracy in Democracy Government—its constitutional frame work, political organisation.

Executive—its rise in power, Secretariate—Cabinet Secretariat, (India) Executive Office of the President (U.S.A.)

Legislature—its decline, growth of legislative secretariat and its working, delegated legislation and control over them, Judiciary. Its independence, administrative justice.

Administrative Machinery for the conduct of Elections in India.

Citizen and Administration—Lokpal, Lokayukta, Ombudsman.

**Core Books :**

1. Schulz : Essentials of Government.
2. Brewster : Government in Modern Society.
3. Catlin : Systematic Politics.

4. Marx, F.M. : Administrative State.

5. Waldo, D. : Administrative State.

PAPER II—*State Administration :*

1. Central Background of State Administration in India.

2. Organisation and Working of State Government :

(a) Governor—his importance and role in administration.

(b) Executive :

(i) Chief Minister : Role, Importance of his office.

(ii) Council of Ministers and Cabinet.

(iii) Cabinet Secretariat.

(c) Legislature : Vidhana Sabha, Composition, functions and Working—Legislative Secretariat.

(d) Judiciary : Brief outline of Organisation of Judicial Courts and their working from State High Court down words—Separation of Executive and Judiciary,

(e) The relationship of the three branches with each other.

3. The Organisation and Working of State Secretariat.

(a) Chief Secretary as the Head of the Secretariat organisation, his role.

(b) Secretary, Joint/Special Secretary, Deputy Secretary, Assistant Secretary.

4. *Organisation and Working of some Typical Departments of Government of Rajasthan.*

(a) Home Department.

(b) Finance Department.

(c) Planning Department.

(d) Development Department.

5. Organisation and Working of some Directorates.

(a) Directorate of Agriculture, and

(b) Directorate of Labour.

6. Organisation and Working of some Boards.

(a) Board of Revenue in Rajasthan.

(b) Rajasthan State Electricity Board.

7. District Administration in Rajasthan :

(a) Development and significance of District Administration.

(b) Role of Collector as the Head of the District Administration.

8. Administration at sub-divisional and Tehsil levels :

S.D.O., Tehsildar, Naib-Tehsildar, Revenue Inspector, Kanungo, Patwari etc.

9. Civil Service in Rajasthan :

(a) Recruitment

(b) Training

(c) Promotion, and

(d) Salary administration.

10. State Administrative Reform—H.C.Mathur Committee Report A.R.C. Report on State level administration.

*Note* :—Wherever the comparative study is needed the instances should be drawn from the States of U.P. and Maharashtra.

*Book Recommended :*

1. Pylee. M.V. : Constitutional Government in India.
2. Khera, S.S. : District Administration in India.
3. Shastri : District Administration.

*Books for Reference :*

1. I.I.P.A. : Revenue Board.
2. I.I.P.A. Regional Branch : Organisation and Working of Government Maharashtra.
3. Rajasthan Government : Secretariat Manual.

4. —do— : Report of Administrative Reforms Committee, 1964.
5. —do— : Report of Ranawat Commission, 1968.
6. —do— : Report of Committee on Training, 1963.
7. H.C.M. Institute of Pub. Admn. : Higher Management of personnel
8. S.R. Maheshwari : Evaluation of Administration in India.
9. I.I.P.A. Maharas- : Machinery of Administration in be Brnch Maharastra.
10. Zahur and Gupta : Machinery Administration in U.P.

**B.A. Third Year Examination****PUBLIC ADMINISTRATION**

Three shall be two papers each of three hours duration and each carrying 100 marks.

**PAPER I—*Local Administration in Rajasthan.***

It is intended to cover Rural and Urban Local Administration in Rajasthan.

- (i) Brief feature of Local govt. in U.K. U.S.S.R., France and U.S.A.
- (ii) Importance of Local Self-Govt. in Modern State.
- (iii) Development of Local Self-Government in India with special reference to Rajasthan.
- (iv) Present set up of Local Self-Government in Rajasthan Classification of Municipal Govt. in Rajasthan.

Municipal Council/Committee. Its composition, power and function's president/Chairman, personal administration, Municipal Commissioner and Executive Officer.

- (v) Democratic Decentralisation — Panchayati Raj institutions-Zila Parishad, Panchayat samittee and Panchayat their composition, power and functions. Pramukh and Pradhan, Personnel administration, Secretary to Zila Parishad, B.D.O., V.L.W. and Panchayat Secretary. Pattern of Panchayati Raj in various states—Maharashtra, Gujrat, Andhra Pradesh.
- (vi) Finances of Local Self-Government institutions.
- (vii) State Control over Local Self-Government institutions.

***Core Books :***

1. R.L. Khanna : Municipal Govt. and administration in India.
2. R. Argal. Municipal Govt. in India.
3. B. Meheshwari : Studies in Panchayati Raj.
4. Narayan Chaturvedi : Panchayati Raj in Rajasthan.

*Reference Books :*

1. Prof. M.V. Mathur & Others : Panchayati Raj in Rajasthan.
2. Potter : Rural Local Govt. in India.
3. Govt. of Rajasthan : Sadiq Ali Report 1964.
4. Govt. of Rajasthan : Rajasthan Panchayat Samiti and Zila Parishad Act, 1959.
5. Govt. of Rajasthan : Rajasthan Village Panchayat Act, 1953.
6. Balwant Rai Committee Report :
7. I.I.P.A. No. on Panchayati Raj.
8. Govt., of Rajasthan : Rajasthan Municipalities Act, 1959.
9. Govt. of India : Diwakar Committee Report, 1963.  
(Gram Sabha).

PAPER II—*Elements of Public Administration.*

See page 172 of the Syllabus, 1970.



**B.A. Hons.Part I Examination**

There shall be four papers each of three hours duration and each carrying 100 marks :

Paper I—Fundamentals of Public Administration.

Paper II—Indian Administration.

Paper III—Social Administration.

Paper IV—Political Institutions and Administration.

**Paper I—*Fundamentals of Public Administration.***

See page 203 of the Syllabus, 1970-

**Paper II—*Indian Administration.***

See page 204 of the Syllabus, 1970.

**Paper III—*Social Administration.***

See page 266 and 267 of the Syllabus, 1970.

**Add : in Core readings :**

(ii) Encyclopedia in Social Work.

(iii) Social Administration by G.B. Sharma.

**Paper IV—*Political Institution and Administration.***

See page 207 of the Syllabus, 1970.

**B.A. Hons. Part II Examination**

**PUBLIC ADMINISTRATION**

There shall be four papers of 3 hours duration carrying 100 marks each.

Paper I—Modern Executives.

Paper II—Financial Administration.

Paper III—Local Administration in India.

Paper IV—States Administration in India.

Paper I—*Modern Executives.*

See page 264 and 265 of the Syllabus, 1970.

Paper II—*Financial Administration in India.*

See page 265 and 266 of the Syllabus, 1970.

Add in the reference books :

6. Prem Chand : Performance Budgeting.

7. A.R.C. Report on Audit & Accounts.

Paper III—*Local Administration*

See page 205 and 206 of the Syllabus, 1970.

Paper IV—*State Administration in India.*

See page 268, 269 and 270 of the Syllabus, 1970. Delete in point No. IV.

Minister—Secretary relations.

Correct in point no. VIII second line dual instead of duel.

**Subsidiary reading :**

1. Ashok Chand : Indian Administration.
2. Maheshwari : Indian Administration.
3. Govt. of India : State Re-organisation Commission Report, 1956.
4. Administrative Reforms Committee's Report of Rajasthan.
5. Maharashtra Karve's Second Report, 1966.
6. Report of Committee on Training in Rajasthan.
7. Administrative Reform Commission Report on State Administration.
8. K.K. Das : Treasury.
9. K.K. Das : Collectorate.

**M. A. Examination . . .****PUBLIC ADMINISTRATION**

There shall be eight papers and a viva-voce. Each paper will be of 3 hours duration and shall carry 100 marks (Theory 90 and Sessional 10). Out of eight papers, there shall be five compulsory and three optional. The optional papers shall be divided into two groups. Any one paper may be offered from group A and any two from Group B. Viva-voce carrying 100 marks shall be held in the final. Dissertation, if offered, shall be permissive only in the final year.

**Compulsory Papers**

- Paper I—Administrative Principles & Theories,
- Paper II—Public Administration in India.
- Paper III—Comparative Public Administration.
- Paper IV—Public Personnel Administration.
- Paper V—Economic Policy and Administration.
- Paper VI—Viva-voce.

**Optional Papers****GROUP A**

- Paper I—Political and Administration.
- Paper II—Economic Systems and Administration.
- Paper III—Social Administration.
- Paper IV—Administrative Law.

**GROUP B**

- Paper I—Development Administration.
- Paper II—Statistics and Research Methodology.
- Paper III—Administration of Public Undertakings.
- Paper IV—Indian Constitution and Civic Life.
- Paper V—Urban Local Administration.
- Paper VI—Rural Local Administration.
- Paper VII—International Organisation and Administration.
- Paper VIII—Organisation and Management.
- Paper IX—Business Administration.
- Paper X—Correctional Administration.
- Paper XI—Labour Welfare Administration.
- Paper XII—Dissertation on any aspect of Public Administration—75 marks.
- (b) Viva-voce on Dissertation 25 marks.
- (M.A. Final only).

Paper I—*Administrative Principles & Theories.*

See page 89, 90, 91 and 92 of the Syllabus, 1970. On page 90 in the third paragraph :

Delete :

Government. Bureaucracy and Citizen :

Bureaucracy—Its concept-Problems of Control over Public Administration—Parliamentary and Judicial control, Obudsman.

Instead of the above please add :

Theories of Bureaucracy : Weber, Merton, Michel.

Paper II—*Public Administration in India.*

1. Evolution of indian Administration—British influence on Indian Administration.
2. Impact of Constitutional frame on Administration. Provisions of the constitution dealing with administration. Federalism and Administration.
3. Study of organisation and working of the central administration : Prime Minister, Council of Ministers. Cabinet Secretariat, Organisation and functions of the Ministries of Home affairs, Defence, Foreign and Finance.

For further details please see page 92 points no. 4, 5, 6, 7, 8 and 9.

Paper III—*Comparative Public Administration.*

See page no. 95, 96 and 97 of the Syllabus, 1970.

Delete point No. 4 on page no. 95

4. Evolution of the study of Comparative Public Administration with special reference to the contribution of F.W. Riggs.

Instead of the above please add :

4. Evolution of the study of Comparative Public Administration. Model Making-various Models.

On page no. 96 in the list of the Subsidiary Readings please add :

10. Chapman : Profession of Government.

On page no. 96 in the list of articles :

- (i) Instead of Ferrel Heada please correct Ferrel Heady.

- (ii) In the 6 line instead study of Public Administration please correct Study of Public Administration.

*Paper IV—Public Personnel Administration :*

Bureaucracy. Its Nature and concept, recent trends with types of bureaucracy with special reference to Morstie Marx.

Development ant significance of Public services—nature of personnel Administration—legal institutional study and behaviourial approach.

A Comparative study of Public Personnel Administration with reference to India, U.K., U.S.A., France on following topics.

Recruitment.

Classification.

Salary and conditions of Service.

Promotion.

Training of Public Service.

Public service ethics in a democracy—conduct rules and discip'inary action, Removal and Appeals—Retirement benefits.

Employee organisation and representation. Service disputes, Whitelysm in England, Right to strike and political Rights of civil servants.

*Core Readings :*

1. Finer : Theory and Practice of Modern Government (Chapters on Civil Service).
2. Stahl, O. Glehn : Public Personnel Administration.
3. N.C. Roy : Civil Service in India.
4. Mackenzie & Grove : Central Administration in Britain (portions on personnel administration).
5. Rai Panandiker : Personnel System & Development Admn.
6. Gladden : Bureaucracy or Civil service.

*Subsidiary Readings :*

1. Nigro Felix : Personnel Administration.
2. Robson : Civil Service in Britain and France.
3. A.K. Chanda : Indian Administration.
4. Reddy : Generalist Vs. Specialists.
5. A R.C. Report : Personnel Administration.
6. Fulton Commission Report.
7. Bureaucracy under stress.
8. O. Malley : Indian Civil Service.
9. Blunt : I.C.S.

10. Van Riper : History of U.S. Civil Service.
11. H.M.S.O. : Masterman Committee Report on Political Activities of Civil Servants.
12. Dwarka Das : Role of Higher Civil Services in India.
13. Govt. of India : Central Pay Commission Reports (I & II).
14. Paranjape, H.K. : Indian Management Pool.
15. Paranjape, H.K. : Flight of Technical Personnel.

#### PAPER V—*Economic Policy and Administration*

See Page 99, 100, 101 and 102 of the syllabus, 1970.

#### *Add in Core Books :*

##### U.S.S.R.

1. Planning in U.S.S.R.—G. Sorokin.
2. Soviet Economic Development since 1917—Maurice Dobb.
3. Soviet Economic—Alice Nove.
4. Soviet Economic Reform.  
L. Pekarsky, Y. Usherenko. Novosti Press Agency (Moscow).

##### France.

1. Economic Planning in France—Hackett and Hackett.
2. Economic Planning—The French Experience—Pierre Banchetti.
3. P.E.P. Publication on Economic Planning in France.
4. Planning for Economic Development in France.  
Papers prepared by Paul Lemark.

##### U.K.

1. Public Administration. (R.I.P.A. Quarterly) Spring, 1966 Special issue on U.K. planning.
2. Administrative process in Britain. Subsidiary (All the three contains in one).
3. Economic Survey of Europe—part II, 1962.
4. Comparative Economic Systems.  
Ed. Jan. S. Prybyla.

#### Optional Papers :

##### GROUP A

#### PAPER I—*Politics and Administration.*

- (i) Approaches to the study of Politics and Administration.
- (ii) political Systems : Common properties of political systems—the universes of political system—the uni-

versality of political structure—the universality of political functions—multi-functionality of political structure.

- (iii) The functions of the political system : Political socialisation and recruitment—the political communication—function the governmental functions : rule making, rule application, rule adjustment etc.
  - (iv) Administrative systems; Common properties of administrative systems, functions of administration Administrative adaptability—Administrative system as a sub-system of political system.
  - (v) Bureaucratic organisations : Essentials of Bureaucratic organization Characteristics of bureaucracy—this Marxist Leninist interpretation—the Weberian and contemporary western interpretation of bureaucracy Re-organization and modernization of bureaucracy. Bureaucracy and social change.
  - (vi) Inter-action between politics and Administration :
    - (a) Bureaucracy and political Development.
    - (b) Civil servants and ministers.
    - (c) Civil Service and Parliament.
    - (d) Civil Service and Political parties and pressure groups.
    - (e) Civil Services and the people.
1. Braidanti : Political and Administrative Development.
  2. David Easton : A System analysis of Political Life
  3. —do— Political System : An Inquiry into the State of Political Science.
  4. La Palombara : Bureaucracy and Political Development.
  5. Giddens and Finkle : Political Development and Social Change.
  6. Robert K. Merton  
and other : Reader in Bureaucracy.
  7. Vopar and Verba : Area Development and political analysis.
  8. James C. Charlesworth : Contemporary political analysis.

9. D.A.S. Trickland and others : A Primer of Political Analysis.

10. W.Z.M. Mackenzie : Politics and Social Science.

PAPER II—*Economic Systems and Administration*

See Page 103, 104, 105 of the Syllabus, 1970.

PAPER III—*Administrative Law*

See Page 108, 109, 110, 111 and 112 of the Syllabus, 1970.

On page no. 108 please add in the list of core books :—

1a. Social Administration by G.B. Sharma.

### Group B

PAPER I—*Development Administration*.

See Page 112 and 113 of the Syllabus, 1970.

PAPER II—*Research Methodology and Statistics in Public Administration*.

### Subject and Object of Methodology :

Take and role of research methodology in Social Sciences with special emphasis on Public Administration—study of behaviour of man under the impact of socio-economic and political phenomenon and scope and limitation of such studies.

Scientific approach—its aims, methods of knowing and the concept of scientific knowledge, Relationship of Theory and Fact—Theory building in Public Administration; concept law, theory and hypothesis—their definition and relationship.

### *Nature of Scientific Social Study :*

Definition of the problem and formulation of a working hypothesis; research design; collection of data; use of historical data; methods of field observation; questionnaires and schedules; technique of interviewing; data processing—classification; tabulation; presentation; content analysis; and report preparing, role and significance of the case study technique in Public Administration.

### *Basic Statistical Concepts and Techniques :*

Problems of measurement in Social Research Levels of Measurement—nominal or ordinal interval and ratio scales. Meaning of statistical units; variables; frequency distributions;



graphic presentation of frequency distribution;—Measures of central tendency—Mean, Mode, Median and quartiles; Measures of dispersion—range, semi-inter quartile range, mean deviation, standard deviation, co-efficient of variation; skewness, coefficient of correlations and its interpretations—Pearson and Spearman's Rank Correlation Association of attributes.

Sampling—Random, Stratified. Multi—stage, cluster, convenience, judgement, quota Elementary ideas (non-mathematical), about probability and statistical inference. Testing of Hypothesis and t, F and Chi-Square distributions.

### Core readings :

1. The Conduct of Inquiry by Abraham Kaplan.
2. The Scientific Social Surveys and Research by Pauline V. Young (4th Edition).
3. Methods in Social Research by W.J. Goode and Paul H. Hat.
4. Fundamental Research Statistics for Behavioural Science by Johan T. Roscoe.
5. A Basic Course in Statistics By—Anderson and Zelditch.

### Subsidiary readings :

1. Concepts and Models in Public Administration. By R.S. Milne.
2. Ten Case studies in Research and Development by N.H. Atthriya.
3. Applied General Statistics By—Croxtton and Cowden
4. Statistics an Intuitive Approach by Weinberg and Schumaker.

PAPER III—*Administration of Public Undertakings.*  
See Page 117, 118 and 119 of the Syllabus, 1970.

PAPER IV—*Indian Constitution and Civil Life.*  
See Page 119 and 120 of the Syllabus, 1970.

PAPER V—*Urban Local Administration.*  
See Page 120, 121 and 122 of the Syllabus, 1970.

PAPER VI—*Rural Local Administration.*  
See Page 122, 123 and 124 of the Syllabus, 1970.

PAPER VII—*International Organisation and Administration*  
See Page 124, 125 and 126 of the Syllabus, 1970.

PAPER VIII—*Organization and Management.*

1. Development in Organisation ideas—major land marks—Scientific management—F. W. Taylor—Organisation—

Theories—Impact of technology on organisation—New Challenges.

2. Management technique—work and method study—its development Basic steps in Work Study Select, Record, Examine, Develop, Instal and maintain.

Time and motion Study—the process of measurement.

Statistical techniques—Collection of data, classification, Tables preparation, draft, forms design—Record Management.

3. Office Management—Layout, general principles of office organisation Sections Coordination between them Office Equipment mechanisation, Automation. Organisation of Reception, Conference meeting, Seminar, Symposium etc. Office etiquettes and behaviour.

4. Elementary office procedure :

Rules of business, handling of Dak, Diary maintenance. Indexing, referencing Flagging papers.

Kinds of communication issue of communication Terms and Abbreviations used in office.

Office procedures in business concerns, differences from Secretariat Manual.

5. Advanced Office Procedure :

Noting with precedents—Examination of Rules, Draft preparation handling of confidential papers—handling of parliamentary/Legislative questions.

Dealing with petitions from public.

Procedure in Banks and other public concern

Dealing with contract.

Recruitment of staff Training.

Maintenance of service records.

Trade Union Relations.

Public Relations.

6. Field Study—Practical visit to office technique of observation Report writing.

Core readings :

See page 128 of the Syllabus, 1970.

Add :

5. Macgraw Hills. Publication Applied Management. Books for reference :

See Page 128 of the Syllabus, 1970.

**PAPER IX *Business Administration :***

1. Nature and Constitutional of business house. Sole Traders; Partnership, Companies, Cooperative Societies, Government Undertaking.
2. Business Combinations—Trusts, Cartels and Holding companies.
3. Insurance excepting Life Insurance.
4. Trade Inland and Foreign.
5. Location and Layout of factories and offices.
6. Personnel Management—Methods of recruitment, training and promotions.
7. Delegation and devaluation of responsibility and authority.
8. Drafting of Minutes, resolutions and report.

**Books recommended :**

1. Haney : Business Organisation.
2. Thomas : Commerce.
3. M.C. Shukla : Organisation and Management  
(S. Chand and Co., Delhi).
4. Ghosh and Om Prakash : Industrial Organisation  
(Indian Press).
5. P.L. Golwalkar : Vyapar Sangathan Evam Vyavastha  
(Ram Prasad and Sons).

**Paper X *Correctional Administration.***

See page 129, 130 and 131 of the Syllabus, 1970.

**Paper XI *Labour Welfare Administration.***

See page 132, 133 and 134 of the Syllabus, 1970.

**Paper XII *Dissertation.***

On any aspect of Public Administration.

**Notes :** (i) Only such candidates as have secured above 50% marks in the aggregate at the M.A. (Previous) Examination, will be eligible to apply for offering Dissertation in lieu of one paper in M.A. (Final).

In case of the University Department, the Head in consultation with the Department Committee will select adequate number of candidates for writing Dissertation according to the expertise available.

Private candidates will not be eligible to offer Dissertation.

(ii) The subjects of dissertation will be approved by the Head of the University Department of Public

Administration and whenever necessary, in collaboration with the Head of the Department of the Institution where the candidate is/are studying, so as to avoid repetition or overlapping.

- (iii) *The division of marks in Dissertation will be 75 for written and 15 for viva-voce.*
- (iv) The Dissertations will be independently evaluated by the external and internal examiners. They will send their marks independently to the Registrar before the viva-voca. The average of the two will be taken as the marks obtained by the candidates in the written part of the Dissertation.
- (v) External & Internal Examiners will jointly hold the viva-voce and allot marks out of 25.
- (vi) Total of both written and viva-voce examinations will be the final allocation/s of marks in dissertations for the candidate/s.

### Diploma Course in Public Administration Examination

There shall be six papers, each of three hours duration and each carrying 100 marks.

Paper I—Public Administration in India.

Paper II—Financial Administration.

Paper III—Public Personnel Administration.

Paper IV—Organization and Management.

Paper V—Social Administration.

Paper VI—Development Administration at State and District levels.

#### Paper I—Public Administration in India.

1. Evolution of Indian Administration—British influences on Indian Administration.
2. *Impact of Constitution frame on Administration.* Provisions of the constitution dealing with administration. Federalism and Administration.
3. Study of organisation and working of the central administration : Prime Minister, Council of Minister's Cabinet Secretariat, Organisation and function of the Ministries of Home affairs, Defence, Foreign and Finance.
4. Outline study of administration at the State level with special reference to the State Secretariat and important Departments of Home, Finance and Agriculture.
5. A study of District Administration in India with special reference to the role of Collector, Revenue, Administration on and Development Administration.
6. An outline of public personal Administration in India, Specialist-Generalist relationship.
7. Control over Indian Administration (a) Minister and the civil servant (b) parliamentary control over Administration (c) Judicial Control over Administration (d) Review of Administration discretion and the institution of Lokpal and Loka-ayukta.
8. Financial Administration—Formulation of budget : Approval of budget and execution of budget—budgetary control, Parliamentary control over finance. Comptroller and Auditor-General of India, Finance Commission.

9. Economic planning and Indian Administration—The organisation of the Planning Commission, role of National Development Council, Organisation and Administration of State Enterprises. Department management, Companies, Public Corporations.
10. Administrative Reform in India.

*Core Reading :*

1. Ashok Chand : Indian Administration (London 1967).
2. Ashok Chand : Federalism in India (London).
3. V.N. Pai : Personnel system for Development  
Panandikar Administration (Bombay, 1966).
4. S.S. Khera : District Administration in India (Bombay 1964).
5. S.S. Khera : Management of State Enterprises in India.
6. Ministry of Home Affairs : Organisation of Departments. Ministries in the Government of India. (New Delhi. 1966).

*Subsidiary Reading :*

1. K. Santhanam : Union State Relations in India. (Asia, Bombay, 1960).
2. Paul H. Appleby : Public Administration for Welfare State (Asia, 1961).
3. C.P. Bhambhri : Public Administration (Meerut, 1967)
4. M.R. Pai and G.R. Roddy : Seceretaryiat and Heads of Department (Hyderabad, 1964).
5. Nabagopal Das : The Public Sector in India (Asia Bombay, 1966).
6. D.P. Singh : Problems of Public Administration in India (Asia, Bonbay).
7. I.I.P.A. : The Organisation and Mechinery of the Government of India (Asia, 1958)

*Reports :*

1. Planning Commission : The Fourth Five Year Plan (Draft Chapters on Implementing the fourth plan).
2. Government of Rajasthan : Report of the Administrative Reforms Committee 1964).
3. Administrative Reforms : Various Reports. Commission
4. A.D. Gorwala : Public Administration (Planning Commission. 1951.)

**Paper II—Financial Administration :**

Budget its meaning and concept—budget as an instrument of social and economic policy, as a tool of Management. Features of the Budgetary system—Surplus deficit and balanced budgeting. Principles of Budgeting. Features and Concept of performance budgeting. Administration aspect of budgeting : formulation and preparation, presentation and implementations Organization and working of the Ministry of Finance, Its role in the formulation and presentation and implementation of the budget. Functions and working of Estimate Committee, Public Accounts Committee and the Comptroller and Auditor General, Union-State Financial Relation—Role of Finance Commission. Agencies of Control—Legislature, Executive, Treasury Control in Britain and the Audit Control.

*Books Recommended :*

1. Prem Chand : Control of Public Expenditure in India.
2. P.K. Wattal : Parliamentary Control of Finance.
3. A.K. Chana : Indian Administration.
4. Sir Herbert Britain : British Budgetary System.

*Books for Reference :*

1. Basil Chubb : Control of Expenditure.
2. Paul Einzing : Control of Purse.
3. Arthur Smithies : Budgetary System in the United State.
4. Burkead : Government Budgeting.
5. A.K. Chanda : Aspects of Audit Control.
6. Paul H. Appleby : Public Administration in India Report of a Survey (Govt. of India, 1953.)
7. Paul H. Appleby : Re-examination of Indian Administrative System (Government of India, 1956).

**Paper III—Public Personnel Administration.**

Bureaucracy, Its nature and concept.

A Comparative study of Personnel Administration in India, Britain, U.S.A. and France.

Development and significance of Public Service, nature of Personnel Administration.

The following topics to be studied with reference to India, U.K., U.S.A. and France.

Recruitment.

Classification.  
Salary and conditions of Services.  
Promotion.  
Training of Public Service.

Public Service ethics in a democracy—conduct rules and disciplinary action Removal and Appeals—Problems of Retirement Benefits.

Employee organisation and representation, service disputes. Whilteysm in England, Right to strike and political Right of civil servants.

### *Core Readings :*

1. Finer : Theory and Practice of Modern Government (Chapters on Civil Service)
2. Gladden : British Civil Service—Its Problems and Future.
3. Stahl, O. Glehn ; Public Personnel Administration.
4. N.C. Roy : Civil Service in India.
5. Mackenzie & Grove : Central Administration in Britain (Portion on personnel administration).

### *Subsidiary Readings :*

1. Nigro Felix : Personnel Administration.
2. Robson : Civil Service, in Britain and France.
3. A.K. Chanda : Indian Administration.
4. O'Malley : Indian Civil Service.
4. Blunt : J.C.S.
6. Van Riper : History of U.S. Civil Service.
7. H.M.S.O. : Masterman Committee Report on Political Activities of Civil Servants.
8. Dwarka Das : Role of Higher Civil Services in India.
9. Govt. of India : Central Pay Commission Reports (I & II).
10. Paranjape, H.K. : Indian Management Pool.
11. Paranjape, H.K. : Fight of Technical Personnel.

### **Paper IV—Organisation and management.**

1. Development in Organisation ideas—major land marks Scientific management—F. W. Taylor—Organisation Theories—Impact of technology on organisation—New challenges.
2. Management technique—work and method study—its development—Basic steps in Work Study—Select, Record, Examine, Develop Instal and maintain.



- Time and motion study-the process of measurement.  
Statistical techniques-Collection of data, classification, Tables preparation, draft forms, design-Record Management.
- 3. Office Management-Layout, general principles of office organisation Sections—Coordination between them-office equipment in mechanisation, Automation, Organisation of Reception. Conference meeting, Seminar, Symposium etc. Office ettiquettes and behaviour.
- 4. Elementary office procedure
  - Rules of business, handling of Dak. diary maintenance.
  - Indexing, referencing—Flagging papers.
  - Kinds of communication—Issue of communication.
  - Terms and Abberviations used in office.
  - Office procedures in business concerns-differences from Secretariat Mannual.
- 5. Advanced Office Procedure :
  - Noting with precedents-Examination of Rules, Draft preparation-handling of confidential papers-handling of parliamentary/legislative questions.
  - Dealing with petitions from bulic.
  - Procedure in Banks and other public coneern-Dea-ling with contract.
  - Recruitment of staff-Training.
  - Maintenance of service records.
  - Trade Union Relations.
  - Public Relations.
- 6. Field Study
  - Practical visits to offices-technique of observatsion-Report writing.

*Core Readings :*

1. The Practice of Organisation & Methods-H.M. Treasury, O & M. London, 1954.
2. Organizations and Methods ed. G.E. Milward, Mac. Donald and Ivans London, 1950.
3. Work Study, I.L.O.

4. Work Study Part I, II, III and IV.  
Secretariat Training School.  
(Ministry of Home Affairs),  
New Delhi, December, 1966.

**Books for references :**

1. Hand Book of organisation and Methods Techniques  
H.O. Dovey, I.I.A.S., Brusses, 1951.
2. Work Methods Manual : R.M. Borbes, Wiley M.A.  
1944.
3. Work Simplification-Public Administration Service,  
Chicago, Illinois, 1951.
4. Work Improvement-G.C. Close Wiley, N. Y. C.  
1958.
5. A Work Simplification Method-J.A.
6. Organisation and Management-C.T.I, Barnard, Har-  
vard Cambridge, Mass, 1958.
7. Work Simplification-Nadler, Washington Univer-  
sity St. Louis, 1957.
8. Office Management : : Principles and Practices Ed.3,  
1953 by Neuner and Haynes.
9. Office Organisation and Method Ed.3,1963,By Mills  
and Standingford.
10. Office Administration Ed. By Mills and Standing-  
ford.
11. Work Study in Administration By N.K. Panda.

**PAPER V—Social Administration.**

1. Concepts : Meaning, nature, scope and painciples of  
social administration.
2. Organisation : Social administration at the central  
level the Department of Social Welfare,the scattered  
nature of social affairs at the central level and .a  
case for the creation of an integrated Ministry of  
Social Affairs, Central Social Welfare.Board, its co-  
mposition, functions, status.
3. Social Administration at the State level---the State  
Department/Directorate of Social Welfare and the  
controversy with regard to their respective roles.  
The State Social Welfare Board and it's relationship  
with State—Department/Directorate of Social Wel-  
fare.
4. Social Administration at the levels i.e. District,  
Block and Panchayat levels.
5. Methods of Social administration--Social Case Work,  
Group Work, and Community organization.

6. Social Policy in India-Need for a Social Policy-Resolution.
7. Social Legislations in India-their inadequacies.
8. Social Planning in India-Social development sector under various Five Year Plans-the problem of dovetailing social development to economic development.
9. Role of Voluntary Action in developing Societies and their relationship with the State.
10. Personnel System for a Social administration-Need for the creation of a special cadre of Social administration at the Central, State and Local levels : and determination of their condition of service.
11. Problems of Social Administration in India.
  - (a) Co-ordination,
  - (b) Human Relations.
  - (c) Grants-in-aid.
  - (d) Common Civil Code.

Core Readings :

1. Marsh, Davis, C. : An Introduction to Social Administration Routledge and Kegan Paul (London). 1965.
2. India, International Centre, Report of the Proceedings of Seminar on Social Administration in Developing countries, 1964.
3. Titmys, R.D. Essay on Welfare State, Allen and Unwin (London 1959).
4. Kulkarni, P.D. : Central Social Welfare Board, Asia Publishing House, New Delhi, 1961.
5. Jaganmadham, V. : 'Social Welfare Organization', I.I.P. A., 1968.
6. Khinduka, S.K. : Social Work in India, Kitab Mahal, Allahabad, 1965.
7. Wedia, A.R. : History and Philosophy of Social Work in India, Allied Publishers, 1968.
8. Friendlander, Introduction to Social Welfare, Prentice Hall, New York, 1959.
9. G.B. Sharma : Social Administration

*Reference Books :*

1. India, Encyclopadia of Social Work, Publication Division, New Delhi, 1968.
2. American Social Work Year Books
3. India, Committee on plan projects, Planning Commission, Report of the Study Team on Social Welfare and Welfare of Backward classes, 1959.
4. White, C.R. : Public Welfare Administration.
5. Marshall, T.H. : Social Policy.

*Journals :*

1. Indian Journal of Social Work.
2. Indian Journal of Public Administration.
3. Political Science Review.

**PAPER V** *Development Administration at the State and District Levels.*

- (i) Concepts of development administration—Administrative objectives for development Administration—the structure of Development administration and organisations for Development Administration—Administrative Machinery for Development Administration.
- (ii) Development Planning—formulation of Development Plans and their financing—Plan implementation and evaluation of programmes—Problems of Plan implementation.
- (iii) The management of personnel—The assessment and planing for personnel requirements for Development—Problems of training of personnel for development administration—Role of Personnel for development Administration.
- (iv) Administrative responsibility and accountability in Development administration—Co-ordination, communication, Delegation and control in Development administration.
- (v) Role of Local Bodies and Voluntary agencies in Development administration.
- (vi) Problems of Development administration and System approach.

*Core Readings :*

1. Irving Swerdlow : Development administration—Concepts and Problems.

2. W. Wood : Development Administration.
3. S.E. Finer : A Primer of Public administration.
4. C.D. Deshmukh : Talking of Management.
5. Paul H. Appleby : Big Democracy.
6. Paul Pigorr and others : Management of Human Resources.
7. La Palombra : Bureaucracy and Political Development.
8. A.P. Barnabas and Donald C. Pelz : Administering Agricultural Department.
9. Harish Chandra Mathur : Proceedings of the Higher State Institute of Manaeement Seminar on Public Admn. Personnel Administration.
10. Planning Commission : Five Year Plans particularly III and IV Five year Government of India. Plan.
11. A.R.C. Report on State Administration.
12. Administrative Reports—Government of Rajasthan.

## APPENDIX IX

*Ref :—Res. No. 21 dated 10.2.71. of Faculty of Arts)*

Minutes of the Meeting of the Board of Studies in Philosophy and Psychology held on 16th and 17th September, 1970 at 12 noon, at the University Office, Jaipur.

### Present

1. Dr. Daya Krishana (Convener)
2. Dr. S.N. Sinha
3. Shri A.M. Ghose
4. Shri G.B. Mathur
5. Dr. Rajendra Prasad
6. Dr. Durganand Sinha
7. Shri C.M. Sharma *Special invitee*

1. Under Section 34(4) (iv) of the University Act, the Board elected Dr.S.N. Sinha, Reader in Psychology as member other than the Convener of the Board of studies to serve on the Committee for the Selection of examiners in the subject for the year 1971. It was further resolved that there should be two Boards of Studies—one for Philosophy and the other for Psychology and an additional member be elected to serve on the Committee for appointing examiners.

2. The Board resolved that the Examiners' report should be circulated well in advance before the meeting of the Board of Studies, so that the members of the Board may take them into account and make relevant comments upon them.

3. The Board scrutinised the statements of qualifications and teaching experience etc. of teachers(received from University teaching departments University College, affiliated institutions and other Universities for inclusion in the revised panel of examiners for 1971 and revised the panel accordingly.

4. The Board recommended courses of Study and text books in Philosophy and Psychology for the following examinations together with changes in Regulations and Ordinances where necessary (vide Appendices A and B) :—

1. Pre-University Examination, 1972.
2. B.A. (Pass) First Year Examination of 1972.
3. B.A. (Pass) Second Year Examination of 1973.
4. B.A. (Pass) Final Year Examination of 1974.
5. M.A. Pre. and/or Final Examination of 1972, and 1973 respectively.
7. B.A. (Hons.) Pt. I & II Exam. of 1973-74.

No suggestions were received from the affiliated Colleges for consideration.

5. The Board considered the following suggestions of the Vice-Chancellor made by him in consultation with the Convener of the Examinations Reforms Committee :

- A. Regarding award of Sessional marks, these may be awarded on the basis of Articulation, Comprehension and Objective Tests of the Students as per details given below :—

*Articulation—4 marks*

Each student may be required to write atleast one essay on the subjects each term, This may be assessed by 2 independent teachers independently and marks recorded. Marks may be declared publicly and if any student feels aggrieved he may be explained why that particular award was given.

*Comprehension—3 marks*

A test may be conducted each term to examine whether the students have picked up the appropriate expression, and have understood the subject matter.

*Objective Test—3 marks*

Under this category marking may be done but the marks may not be shown to the candidate. But the solution may be written by the teacher and posted on the notice board so that the students may know the correct answers. If this rational basis is adopted there is a chance of increasing the quantum of internal assessment.

B. As regards syllabus at the Post-graduate level, I suggest that :—

- (i) a list of full and half courses may be prepared according to the availability of teaching competence.
- (ii) it may be possible for a student to offer two full courses as a topic to give specialisation in that topic. Such a student would prepare himself for research in this topic.

C. For very few bright students it may be suggested that they may be encouraged to do some self-study on pre-assigned topics which are not included in their curriculum and they may be assessed entirely on that as far as sessional marks are concerned.

(A) The Board accepted the general-principle. However, it was suggested that the sessional marks in all cases should be revealed to the students, where this was not considered feasible or desirable, atleast the grade or division marks should be declared.

(B) The Board considered the suggestion and Full and Part courses were prepared for M.A. Examinations as given in Appendix 'A'

(C) The Board recommended that this should be in lieu of the total sessional marks allotted in that year, and that it should be done for each paper separately.

6. It was reported that the Academic Council, vide its Res. No. 35 dated 21-4-70 accepted the following draft resolution proposed by Dr. Dayakrishna, Chairman, Examination Reforms Committee vide his letter No.Acd/c/1082 dated 17-4-70 as a result of discussions in the meeting of the Examination Reforms Committee held on 12th April, 1970 :—

“Resolved that in the interest of raising standards of teaching and examinations and award of degrees the Board of Studies may prepare alternative Schemes of courses and Examinations in their respective subjects to be implemented as early as possible.”

The Board did not consider any alternative Scheme of examinations. As for the alternative courses it thought that the increase of optional papers from two to three along with the new scheme of Full and part courses fulfilled the function.



7. The Board considered the list of publications as printed in the catalogue received from the senior Research Officer, commission for Scientific and Technical Terminology (Ministry of Education) New Delhi vide his letter dated 30-7-1970 for inclusion in the University syllabi observed that the Hindi translations of Leibnitz, Hume and Kant were already being used in the courses prescribed in this University.

8. The Board considered the list of publications as printed in the catalogue received from the National Book Trust of India vide their letter No. 37-2/69/Sc. dated the 7th November, 1969 for inclusion of their books in the Syllabi of the different Examinations and observed that there were no significant books in Philosophy in the list which could be considered.

9. With reference to the Faculty of Arts resolution No. 34(v) dated the 4th February, 1970 the Board reconsidered the recommendation of the B. O. S. in Sanskrit made vide its Res. No. 8 dated 8-9-69 to the effect that some knowledge of Sanskrit be made compulsory for those studying Indian Languages, Ancient Indian History, Indian Philosophy or Modern Indian Political Thought and Institutions for their M. A. Examination.

Indian Philosophy being only one of the papers to be taken by the student, the Board did not consider it desirable that the knowledge of Sanskrit be made compulsory for every student taking Philosophy. However, it was thought desirable that those who do research in Indian Philosophy should know Sanskrit.

10. The Board reviewed Resolution No. 6(i) dated 11/12th September, 1970 and the scheme of Examination in the subject of Psychology for the Second Year T. D. C. (Arts) Examination of 1970 which was notified as under:—

	Max. Marks	Min. Pass Marks
Paper I	100	36
Paper II Part-I	50	18
Part-II	50	18

In this connection; it was reported to the Board that on declaration of the result for the examination of 1970, a few candidates represented against the minimum percentage of pass-marks prescribed for each paper. On the recommendation of the Convener, B. O. S. in philosophy, the Vice-

Chancellor accepted the following scheme for the Examination of 1970:—

	Max. marks	Min. Pass Marks.	
Paper I	100	—	} Minimum Pass Marks in the subject—72
Paper II—Part I	50	18	
Part II	50	18	

The Board recommended that candidates appearing at II Year (Psychology) be required in Paper I to obtain a minimum of 25% marks so as to pass. In Paper II candidates be required to pass separately in parts I and II by obtaining a minimum of 18 marks in each part. It will also be required for the candidate to pass in aggregate by obtaining 72 marks in both the papers.

The Board further resolved that Part II of Paper II above shall be considered as practical examination for purposes of failures and Supplementary examination of II Year T.D.C. (Psychology).

The Board desired that the above change should be brought into force with effect from 1970-71 and Vice-Chancellor be requested to approve this change under his emergency powers. Necessary change be made in the Scheme of Examination.

11. According to the Scheme prescribed in Philosophy for the B.A. (Hons.) Part II Examination a candidate has the option to offer two papers of any other discipline in lieu of Honours Paper III and IV. The Board reviewed the above provision and recommended that a student may offer one paper outside his main Hons. subject in lieu of one of the optional papers provided that the paper offered is of the Hons. standard and is considered to be of academic significance to his main subject by the Head of the University Deptt. or the college and there is provision for teaching of that paper in the college concerned.

Sd/—Daya Krishna  
(Convener)

## APPENDIX A

### PHILOSOPHY

#### I Year T.D.C. Examination, 1972.

*Syllabus 1970 ed. Page 15-16.*

Replace Notes 1 and 2 by the following :—

**Note :—**There will be one compulsory question of 20 marks having two parts of 10 marks each—(1) on the concepts mentioned in the syllabus and (2) on the objective type question which will consist of four sections. Each section will have 2½ marks. Each section will have atleast five questions :

The sections will consist of the following ?

1. Who wrote the following books ?
2. Whose names are associated with the following ?
3. Distinguish between.
4. Who holds the statements ?

#### II Year T.D.C. Examination, 1973.

*Syllabus 1970 Ed. Page 68-69.*

Delete Note 1 add 2 on page 68 and replace these with Note I as given under Paper I for I Yr.T.D.C. Examination, 1972.

Under books recommended for Paper I, delete the book by N.K. Devraj and add the following :

1. Armstrong : Ancient Philosophy.
2. Stace : Greek Philosophy.
3. J.P. Awasthi : Paschatya Darshan.

#### Paper III. Ethics.

Delete the following topic at page 69.

“Ethical problem concerned with language” and substitute “Ethics and language.”

#### III Year T.D.C. Examination, 1974.

*Syllabus 1970 ed. pages 136-137.*

substitute the following for optional paper (i) on p.136. ‘One Indian System or One Western Thinker’ for ‘One Indian Thinker and Western Thinker’ existing at present Under Books prescribed for ‘Indian System’ substitute the following for existing :

Samkhyakarika of Isvarkrishna with Gaudaped's commentary :

English ed. by Mainker and Hindi edition by Brij Mohan Chaturvedi.

*Books recommended :*

Delete 'Samkhya by A.B. Keith.  
Western Thinker.

*Books Prescribed :*

1. Platos' Republic. (delete "all volumes ? except IX)

Add : 2. Berkelys' Principles (Hindi translation by Sangamala Pandeya).

M.A. PREVIOUS EXAMINATION, 1972.

PAPER I : *Indian Philosophy (Problems).*

The following problems are to be studied :

(a) *Epistemological Problems :*

1. Nature of Knowledge.
2. Valid and invalid knowldge.
3. Criteria of Truth.
4. Sources of knowledge.
  - ( i ) Pcrception.
  - (ii) Inference.
  - (iii) Arthaptti.
  - (iv) Anupalabdhi (Negation).
5. The Problems of Meaning.

(b) *Metaphysical Problems.*

1. Nature of Reality,
2. Caustion,
3. Relations and qualities.
4. Universal and practicular,
5. Self.

(c) *Ethical Problems.*

1. Moksa and its relation to action.
2. Doctrine of Karma and its ethical implications.

*Books Recommended :* The relevant portions of the following Books :

1. G.P. Bhatta : Epistemology of Bhatta.

2. D.M. Datta : Six Ways of Knowing.
3. M. Hiriyana : Indian Philosophical Studies.
4. K.D. Bhattacharya : Recent Indian Philosophy.
5. M. Hiriyana : Outline of Indian Philosophy.
6. D.N. Shastri : Critique of Indian Realism.
7. Niniah Smart : Doctrine and Argumentation in India Philosophy.
8. Karl A. Potter : Presuppositions of India's Philosophies.
9. C. Kunhan Raja : Fundamental Problems of Indian Philosophy.
10. Dr. R.C. Pandeya : The Problem of Meaning in Indian Philosophy.
11. K.C. Bhattacharya : Studies in Philosophy Vol. I.
12. Gaurinath Shastri : The Philosophy of Word Meaning.

#### PAPER II : *Western Philosophy*.

The students of M.A. Previous(Philosophy)are supposed to be acquainted with the course of the History of Western thought right from Thales upto present day with special reference to the following thinkers :

Plato.  
Aristotle.  
Thomas Aquinas  
William of Ockham  
Descartes  
Leibnitz  
Hume  
Kant  
Hegel  
Nietzsche  
James  
Moore  
Russell  
Sartre  
Wittgenstein  
Austin.

#### *Books Recommended :*

1. A Critical History of Western Philosophy.  
D.J.O'Connor.
2. A History of Philosophy : F. Copleston. S.J.

M.A. Final Examination, 1973

#### COMPULSORY

#### PAPER V : *Recent Philosophy*.

Books prescribed : Deleat Sense & Sensibilia Austin.

For Paper VI, VII and VIII the students can take and Full & Part Courses as detailed below : in the manner prescribed as under :—

Note : Candidates may offer :

1. One Full course and Fourth Part courses, or
2. Two Full Courses and two part course, or
3. Three Full course.

In case the candidate offer Two or more Full courses he/she shall have to take Two and only Two Full courses from One group only.

The following Papers under Group C & E consist of two parts. Candidate wishing to offer these papers as Full course Paper will have to take both the parts, while those offering part-courses of these papers can take only the first part as the part-course paper. Full course paper will be of 100 marks, while Part-course papers are of 50 marks only.

#### Group 'C'

1. Philosophy of Law.
2. Political & Social Philosophy.

#### Group 'E'

Philosophy of Science.

### FULL & PART COURSE

#### Group 'A'

Greek Philosophy : From Thales to Proclus.(Full Paper)

Books Prescribed : Copleston : History of Western Philosophy Vol. I. John H. Finley : Four stages of Greek Thought stand for University Press).

2. Medieval Philosophy : From Augustine to Nicolas Cusanus.

Books prescribed : 1. Copleston : Medieval Philosophy.  
2. Weinberg : History of Medieval Philosophy.

Books recommended : Gilson : The Spirit of Medieval Philosophy.

3. Modern Philosophy : With special reference to Descartes  
Hume & Kant.

1. Desartes : Meditations.
2. Kant : Critique of Pure Reason.
- 3, Hume : The treatise on Human Understanding.
4. Contemporary Philosophy.

(a) Husserl : Books prescribed : 1. Phenomenology  
& the Crisis of  
Philosophy.  
2. Cartesian Meditations.

Or (b) Austin : Books prescribed : 1. Philosophical  
Papers.  
2. How to do things with words.

Or (c) Wittgenstein : Books prescribed : Tractatus Logico-Philosophicus

*GROUP 'B'*

1. Buddhism : Text Prescribed from 1970 syllabus—  
optional Paper I.
2. Vedanta : Samkara or Ramanju.  
Texts prescribed the same as optional (iv) of 1970  
syllabus. Only Yatindramad dipika to be eliminated.
3. Contemporary Indian Philosophers.  
(i) K.C. Bhattachaya : Books same as under Optional (viii) of 1970 syllabus.

Or (ii) Shri Aurobindo : Book prescribed : Life Divine  
Vol. I.

*GROUP 'C'*

1. Philosophy of Law Pt. I (Full and Part) 50 marks  
Books Prescribed : The Idea of Law by Dennis Lloyd (Pelican)  
Part II. „ „ Conception of Law by H.L.A. Hart 50 marks.

2. Political and Social Philosophy. (Full and Part).

Pt. I Book prescribed : Political Ideas Ed. David Thomson.  
(Pelican) 50 marks.

Pt. II. „ „ Social Principles and the Democratic  
State (Benn and Peters.) (Selected  
chapters) 50 marks

3. philosophy of History. (part Course) 50 marks.  
Book prescribed : Introduction to the philosophy of by W.W. Walst (Latest edition)

4. Philosophy of Education. (Full course) 100 marks  
Book prescribed : What is Philosophy of Education by Christopher J. Lucas

#### GROUP 'D'

1. Philosophy of Art. (Full course) 100 marks  
Books prescribed and recommended the same as optional (ix) 1970 of syllabus.
2. Philosophy of Religion. (Full course) 100 marks  
Book prescribed: Philosophy of Religion Ed-George L. Abernethy and Thomas A. Langford.
3. Ethics. (Full course) 100 marks  
Books prescribed : 1. Language of Morals by Hare.  
2. Fundamental Principles of Methaphysics of Morals by Kant ed. H.J. Paton.  
3. The Moral Point of View by K. Baier. (Abridged edition.)

#### GROUP 'E'

1. Philosophy of Science of I and II. (Part and Full)  
Pt. I Book prescribed : The nature of Scientific Thought by Marshal Walker M. Suntaram, N. Delhi. 50 marks  
Pt. II „ „ The philosophy of Science Ed. by P.H. Nidditch (Oxford). 50 marks
2. Philosophy of Language. (Full course) 100 marks  
Book perscribed : philosophy of Language by William Alston.
3. Philosophy of Mathematics. (part course) 50 marks  
Book prescribed : Intr. to phil, of Mathematics by Stephen Korner (Hutchinson Univ. Library).



4. Philosophy of Mind. (part course) 50 marks  
Book prescribed : philosophy of Mind V.C. Chappel  
(prentic Hall).

5. Philosophical psychology (part course) 50 marks

6. Systems of psychology. (part course) 50 marks  
Book prescribed : Systems of psychology by Marx  
and Hellix.

(Mcgraw Hill)

## APPENDIX B

Minutes of the Meeting of the Board of Studies in  
Philosophy and Psychology : held on 16-9-1970.

### Present

1. Prof. Daya Krishna (*Convener*)
2. Prof. D. Sinha (*External Members for Psychology*)
2. Prof. R. Prasad (*External Member for Philosophy*)
4. Dr. S.N. Sinha
5. Shri A.M. Ghose.
6. Shri G.B. Mathur.

The Board recommended the courses of study as under :—

### PSYCHOLOGY

Ist Year T.D.C., 1972

#### *Recommendation :*

Delete : Samanya Manovigyan Ki Rooprekha by Rajrajeshwari Prasad Sinha, Vimal Prasad Rai, Advesh Kumar (Bharti Bhawan, Patna—4).

Add : for Prescribed Text-book :

“Manovigyan” by Norman. L. Munn. Translator :

Atma Ram & Sons, Chapter 16 (Excluded)—  
Publisher Rajkamal Educational Paperback.

IIInd YEAR T.D.C.

Supplementary item No. 11

Add : note on page LXXIV :

Board of Studies Resolved that “Candidates are required in paper I to obtain a minimum of 25% marks so as to pass. In paper II candidates are required to pass separately in part I and II by obtaining a minimum of 18 marks in each part. It will also be required for the candidate to pass in aggregate by obtaining 72 marks in both the papers.

Part II of Paper II alone shall be considered as Practical examination for purpose of failures and Supplementary examinations.

The above change should be brought into effect from 1970-71 and the V.C. be requested to sanction this change, under his emergency powers.”

*Paper II on page 70 :*

Part I

Delete : Measuring and replace it by putting Measure in General.

Add : Product moment correlation.

*On Page 71 :*

From Book Prescribed :

Delete No. 2

No. 3 Parmeshari to be read as Parmeshwaran.

IIIrd YEAR T.D.C.

Paper II on page 141 :

(i) Educational Psychology.

*Books Recommended :*

No. 3 : should read as Postman and Egan not Egan and Postman. From Book prescribed.

The changes mentioned below were recommended in the last year 1969-70. Board of Studies meeting, and they have not been incorporated in the syllabus for 1970-71. Hence, the Vice Chancellor may please be requested to bring the changes with effect from the session 1970-71 and the private candidates be informed accordingly.

Delete : "Gates, et. al—Educational Psychology. Alternate book prescribed" replace for 1971.

Skinner C.E. (Ed.) Fourth Edition prentice Hall New Delhi, 1964.

Part II Chapter IV

Chapter XXII and instead of deleting Chapters 7, 8, 9, 10, 11 and 13 delete Part III (Whole).

On page 140 : Paper—I

Delete : Experimental Psychology to be replaced by "Experiments in Psychology."

B.A. Hons. (Part—I)

*Paper I—one page 227.*

Nomenclature of the Paper to be changed. from Advanced General Psychology, and the paper is to be called as 'Experimental Psychology.'

Delete : Remembering Forgetting and Thinking. Replace it by Retention and Problem solving.

Topics Add : Schools of Psychology : Behaviourism, Gestalt.

Add in books prescribed :

Woodworth and Shoben : Contemporary School of Psychology, Book Prescribed : Munn. N.L. 'Psychology' 5th Edition (Ind. Ed.)

### *Paper III*

Add : Scientific Methods, Types and levels of scientific explanation. Introduction to Experimental Design: Factorial vs. Functional Design, Psychophysical Methods. Paired comparison scaling methods (elementary level sampling).

### *Correlation Methods :*

1. Product moment.
2. Phicorrelation.
3. Rank order correlation.

Test of Significance.

1. 't' test.
2. 'U' test.
3. Chi-square test.

Add Book recommended :

3. Mc Guigan, F.J. : Experimental Psychology. 2nd Ed., 1969, Prentice Hall of India.
4. Ray, Hayman : Nature of Psychological Enquiry edition.

### *Paper IV :*

To check whether J.C. Coleman : Books is Prescribed for 1971 Exam.

B.A. Hons. (Part II)

On page 282 :

Paper I Industrial.

Topics : Add : for Paper II--Frustration in Industry.

### *Books Prescribed :*

Add : 1. Psychology in Industry. Third Edition. N.R.F. Maier (Oxford and IBH Publishing).



*Paper III—(Choice in Compulsory Paper)*

Any one papers given below from the following, or Thesis :

- |      |                                    |           |
|------|------------------------------------|-----------|
| I.   | Sensory Psychology-Neuropsychology | 100 Marks |
|      | Or                                 |           |
| II.  | Motivation                         | 100 Marks |
|      | Or                                 |           |
| III. | Psycholinguistics                  | 100 Marks |
|      | Or                                 |           |
| IV.  | Psychology of Personality          | 100 Marks |
|      | Or                                 |           |
| V.   | Thesis                             | 100 Marks |

**Optional**

*Optional Part Papers—50  
Marks Each*

*Full Papers—100  
Marks Each*

- |   |   |
|---|---|
| 1. Human Engineering.                                       | I. Industrial Psychology and Human Relations. |
| 2. Organizational Psychology                                |   |
| 3. Comparative Psychology.                                  | II. Clinical Psychology.                      |
| 4. Psychopharmacology.                                      |   |
| 5. Philosophy of Behavioural Science & Theory Construction. | III Guidance & Counseling.                    |
| 6. Philosophical Psychology.                                | IV Psychometrics & Mental Test construction,  |
| 7. Military Psychology.                                     |   |
| 8. Psychology of Criminal Behaviour.                        |   |

**M.A. PREVIOUS**

*On page 19.*

Paper I—Delete : “MURPHY, G.” Books

Add : Woolman : Contemporary Theories and Systems in Psychology.

Paper II—Delete : ‘Boring Langfield & Welds’ Book

*From Reference Books :*

Delete No. 1, 2, 3, 4 & 5

*Add :* Helson H. & Bevan : Contemporary Approches to Psychology.

*Add :* Andreas : Experimental Psychology.

*Paper III*—Page 20 for 1971 (Exams.)

Delete list of Experiments on page 20 & Delete list of tests on page 21.

*Add :* List of Experiments (M.A. Previous Psychology).

Time 6 hrs. Students are required to conduct two experiments in the examination.

1. Figural after effects.
2. Time perception (Reproduction of Temporal Internals).
3. Zeigarnik effect.
4. Problem solving-Katona's matchstick Problem.
5. Knowledge of result.
6. Verbal learning-Intera Serial Inhibition.
7. Discrimination learning.
8. R.T. (Effect of Set and Complex R.T.).
9. Set in thinking.
10. Verbal Conditioning.
11. Depth perception.
12. Retro-active Inhibittion.
13. Experiments on Signal detection.
14. Effects of Noxious Stimuli on P.G.R.
15. Psychophysics R.L. & D.L.
16. Attitude Scale construction—Thrustone and likert Type.
17. Interview Schedule.
18. Questionnaire.
19. Design of experiment : Randomized and Factorial Design.
20. Content Analysis.

*Books Prescribed :*

1. Steven's : Laboratory Experiments in Psychology, 1965.
2. Woodworth, R.S. & Scholsberg, H. : Experimental Psychology.

Refer pages 19-21 in the relevent papers :

*Paper I. History & Systems*

Book prescribed : Contemporary theories and Systems

in psychology by Woolman (Indian Edition).

Paper II. *Experimental Psychology (Theory Paper)*.

Books prescribed : Method & Theory in Experimental psychology by Osgood, C.E. (Excluding part I & Language Behaviour) chapter 16.

Paper III. *Physiological Psychology* (New paper).

Book prescribed : Foundations of Behaviour-Research: Kerlinger, F.

Paper IV. *Research Methods*.

Book prescribed : Physiological Psychology : Morgan. C. (3rd Ed.) Indian Edition.

Book recommended : physiological psychology : by Thompson.

Paper V. *Practicals*. (practicals as per list attached.)

Books prescribed : Experimental psychology : Woodworth & Scholberg.

2. Lab. Experiments in psychology : Steven's.

M.A. Final

Prescribed Text books :

Paper I

Social Psychology.

Paper II

Part—I: Psychological Testing—50 Marks

Part-II Dissertation of }  
Project work } 50 Marks

On page 22

Delete paper V—Put paper I instead.

Paper I

Delete : Textbook—Lindzey—Handbook of Social Psychology of volumes.



- Put : (i) Social Psychology by Secord & Backman.  
(ii) Social Psychology by Sherif & Sherif.

On page 23 :

Delete : Paper IV

Abnormal Psychology & The Textbooks prescribed.

Put Paper II : Paper Two shall consist of Two Parts :-

*A list of practicals (Paper V)*

1. Figural after effects.
2. Time perception (Reproduction of Temporal Internals).
3. Zeigarnik effect.
4. Problem solving Katona's matchstick Problem.
5. Knowledge of result.
6. Verbal learning—Intra Serial Inhibition.
7. Discrimination learning.
8. R.T. (Effect of set and Complex R.T.)
9. Set in thinking.
10. Verbal Conditioning.
11. Depth perception.
12. Retro-active Inhibition.
13. Experiments on Signal detection.
14. Effects of Noxious Stimuli on P.G.R.
15. Psychophysics—R.L. & D.L.
16. Attitude Scale construction—Thurstone and likert Type.
17. Interview Schedule.
18. Questionnaire.
19. Design of experiment : Randomized and Factorial Design.
20. Content Analysis.

## PART I

Psychological Testing

50 Marks

*List of Tests :*

1. Psychometric Tests of Personality
2. Projective Tests of Personality
3. Aptitude and Achievement Test Battery
4. Use of Semantic Differential Techniques.

5. Tests of Cognitive Factors ( WAIS ) (Speed and Power Tests)

*Books Prescribed :*

1. Freeman, F. : [3rd Ed. (Indian Ed.)] Theory and Practice of Psychological Testing.

*N.B.* Two Representative Test from each topic listed above. have to be performed at least on ten subjects.

PART II

Field Dissertation/Project work                      -                      50 Marks

—To be completed on a Topic approved by a Teacher undertaking to supervise the work of the candidate.

*N.B.* Candidates are required to obtain a minimum of 30% Marks in each part, separately.

Delete : All-Optional Papers :—

Group A on page 23-24 (Full)

Group B on page 25-26 (Full)

Group C on page 27-28 (Full)

Group D on page 28-29 (Full)

Group E on page 29-30 (Full)

*Paper III*

(Choice in compulsory Papers/Thesis)

Any one papers/or Thesis in lieu of it carrying one hundred marks can be chosen from the following :

III a. Sensory Psychology and Neuropsychology

100 Marks

Prescribed :

Textbook : Corson : The Experimental Psychology of Sensory Behaviour

Conard, G. Mueller : Sensory Psychology.

Or, III b. Motivation.

100 Marks

Text books

- Prescribed :
1. Haber, Current Research in Motivation.
  2. Atkinson, I.W. Introduction to Motivation.

Or, III c. Psycholinguistics :

100 Marks

Prescribed :

Textbook : Saporta, S. (Ed.) Psycholinguistics—a book of Readings.

Rosenberg, S. (Ed.) New Directions in Psycholinguistics.

Or, III d. Psychology of Personality—100 Marks

Prescribed.

Textbooks : Hall Lindzey : Theories of Personality.

Allport, G.W. Pattern Growth and Personality.

Or, Thesis

100 Marks

*Optionals (to be put in effect from Session 1971-72).*

Candidates can select one or two full paper from the following groups :—

I Industrial Psychology and Human Relations—100 Marks

Textbook : (1) Ghiselli and Brown (Ind. Ed.) Second Ed. Personnel and Industrial Psychology.)

(2) Maier, N.R.F. : Principles of Human Relation (3rd Ed.)

*Books Recommended :*

Blum : Industrial Psychology and its social foundations.

II Clinical Psychology

100 Marks

Prescribed Text :

1. Schaffer and Lazarus : Fundamental concepts of clinical Psychology.

2. Surdberg and Tyler. Clinical Psychology.

III Guidance and Counselling

100 Marks

Books prescribed :

1. Brayfield, A.H. (Ed.) : Readings in Guidance.

2. Hahn, M.E. and Mc Clean, M.S. : Counseling Psychology.

V Psychometrics : 100 Marks

Book Prescribed :

1. Gullford, J.P. Psychometrics : (2nd Ind. E d.)  
International Student Edition.

*Book Recommended :*

1. Gu.likson : Mental Tests.

#### Optional Part Papers

Candidates can select either two or four from the following, each papers carrying 50 marks :—

(1) Human Engineering 50 Marks

Prescribed Text :

Mc Cormick E.J. (Ed.) : Human Factors in Engineering.

*Books Recommended :*

Chapnis, Morgan et. al. Applied Experimental Psychology.

(2) Organizational Psychology 50 Marks

Prescribed Text :

E.H. Schein : Organizational Psychology.

*Books Recommended :*

Katz and Kahn : Social Psychology of Organization.

(3) Philosophy of Behavioural — 50 Marks

Science and Theory construction.

Prescribed Text :

1. The Nature of Scientific Thought : M. Walker.

2. The Nature of Psychological Inquiry : Ray Hyman.

*Books Recommended :*

The conduct of inquiry : Abraham Kaplan

(4) Philosophical Psychology 50 Marks

Prescribed Text :

“Philosophical Psychology” by

*Book Recommended :*

1. Melvin H. Marx : Psychological Theories  
(2nd Ed.)

(5) Comparative Psychology 50 Marks

Prescribed Text:

Comparative Psychology (Rev. Ed.) by Denny, M.R.  
and Ratner, S.C.

*Book Recommended :*

Roethlisberger : Principles of Comparative Psychology.

(6) Psychopharmacology 50 Marks

Prescribed Text :

Behaviour Pharmacology by Thompson, T. & Schuster,  
C.R.

(7) Military and Personal Psychology 50 Marks

Book Prescribed :

Borighd, E.G. (Ed.) : Psychology for the armed Services.

(8) Psychology of Criminal Behaviour 50 Marks

Book Prescribed :

Eysenck H.J. : Crime and Personality.

## APPENDIX XIV

*(Ref. Faculty of Arts Res. No. 21 dated 10-2-71)*

Minutes of the Meeting of the Committee of Courses  
in Modern European Language held on 19th September, 1970.

### Present

1. Mrs. Vellintina
2. Shri L.K. Das
3. Mrs. P. Surana
4. Shri J. Mukerjee
5. Shri M.K. Pandey,

1. The Committee could not offer any comments on the examiners report as some examiners reports of the various examinations in Russian/German/French were reported not to be received from the examiners concerned. The same reports be obtained from them.

The Committee observed that---

- (a) In Modern European Language, the question paper should not be incursive.
- (b) The instruction to the examination Centre Superintendent be issued that wherever the use of Dictionary is prescribed in the paper, the same be allowed in the examination hall.

2. The Committee suggested that every examiner must have knowledge of Hindi where Hindi is required for the paper and accordingly, the panel of examiners made.

3. The Committee recommended the courses of study and text books in Modern European Language for the following examinations together with the changes in Ordinance, if any. (Given in Appendix A.)

1. Diploma/Certificate Course in Examination of 1972 and 1973 respectively.
2. B.A. (Pass) First year T.D.C. Examination of 1972.

3. B.A. (Pass) Second year T.D.C. Examination of 1973.
4. B.A.(Pass) Final Year T.D.C. Examination of 1974.

4. The Committee considered the question of relaxing the minimum qualifications laid down for teachers of Certificate/Diploma Courses in Modern European Languages under O.65 of the University Hand Book Part II and treating a person holding the B.A.(Hons.)Degree in Russian Language and Literature of the Institute of Russian Studies, New Delhi, as qualified for teaching Certificate/Diploma Courses in Russian Language in view of letter No. F. 17-25/69-RHD/(U. 4) dated the 12th December, 1969 from the Ministry of Education and Youth Services and letter No. F. 1-4/IRS/70 dated the 14th February, 1970 from the Institute of Russian Studies.

The Committee agreed with the above proposal.

5. With reference to recommendation No. 7 made by the Committee as its meeting held on 17th December, 1969 to the effect that a post-Diploma Course in Modern European Languages be introduced in the University. It was reported that the aforesaid recommendation had been accepted in principle vide Faculty of Arts Resolution No. 18 dated the 3rd February, 1970. The Committee therefore suggested that—

- (i) The Courses of Study for the said examination in Russian, German, French, will be sent by the Chairman of the Committee after consultation with the members of the Committee by Correspondence.
- (ii) Necessary amendments in relevant Statutes and Ordinances as given in Appendix 'B' be made.

6. Since the book 'Nina-Patapov' (Russian 1st, 2nd and 3rd) prescribed for the Certificate Course in Russian 1971 Examination is not available, the University Department has switched over to the book 'Wagner' which was not prescribed for the University Examination. Under these circumstances, the Committee is of the opinion that the book 'Wagner' be prescribed for the Certificate Course Examination of 1971. The Lessons prescribed for the Examination will be 1-25 only.

6. The Board considered the suggestions of the Vice-Chancellor made by him in consultations with the Convener

of the Examination Reforms Committee—

- A. Regarding award of Sessional marks, these may be awarded on the basis of Articulation, Comprehension and Objective Tests of the students as per details given below :—

*Articulation*—4 marks.

Each student may be required to write at least one essay on subject each term. This may be assessed by 2 independent teachers independently and marks recorded. Marks may be declared publicly and if any student feels aggrieved he may be explained what that particular award given.

*Comprehension*—3 marks.

A test may be conducted each term to examine whether the students have picked up the appropriate expression, and have understood the subject matter.

*Objective test*—3 marks

Under this category marking may be done but the marks may not be shown to the candidate. But the solution may be written by the teacher and posted on the notice board so that the students may know the correct answers. If this rational basis is adopted there is a change of increasing the quantum of internal assessment.

- B. As regards syllabus at the Post-graduate level I suggest that—

- (i) a list of full and half courses may be prepared according to the availability of teaching competence.
- (ii) it may be possible for a student to offer two full courses as a topic to give specialisation in that topic. Such a student would prepare himself for research in this topic.
- (iii) a student who wishes to learn the subject for becoming a teacher, he may offer 4 half courses covering a variety of topics to have



an extensive view of the subject. In fact the students may have to choose one full and two half courses.

- C. For very few bright students it may be suggested that they may be encouraged to do some self-study on pre-assigned topics which are not included in their curriculum and they may be assessed entirely on that as far as sessional marks are concerned.

*Resolved to recommend that the above suggestion be accepted.*

7. It was reported that the Academic Council, vide its Res. No. 35 dated 21-4-70 accepted the following draft resolution prepared by Dr. Dayakrishna, Chairman, Examination Reforms Committee vide his letter No. Acd/c/1082 dated 17-4-70 as a result of discussions in the meeting of the Examination Reform Committee held on 17th April, 1970—

“Resolved that in the interest of raising standards of teaching and examinations and award of degrees the Board of Studies may prepare alternative Schemes of courses and examinations in their respective subjects to be implemented as early as possible.”

*Resolved to recommend that the proposal be deferred.*

**M.K. Pandey**

*Convener*

## APPENDIX "A"

## Russian

## (1) Diploma Examination of 1972—

The book 'Nena-potapao' Russian be deleted and the lessons 26-40 of the book 'Wagnor' be presented.

## (2) First Year T.D.C. Examination of 1972—

One paper—(Three Hours)

(a) Translation from Russian to English and Hindi	30 marks
(b) Translation from English or Hindi to Russian	15 marks
(c) Grammar	25 marks
(d) A composition in Russian(A choice of subject is given)	10 marks
(e) Viva-Voce	20 marks
	<hr/>
	100 marks
	<hr/>

*Books Prescribed :*

(To be recommended later on)

*Recommended Dictionaries :*

Dictionaries Russian—English, English—Russian.

## (3) Second Year T.D.C. Examination of 1973 :

Paper I—History of two Russian Languages and literature (including Economic History of Russian from 1725 to the present day)	80 marks
Viva-voce	20 marks
	<hr/>
	100 marks
	<hr/>

*Note :* Candidates have the option to answer this paper through the medium of Hindi, English or Russian.

*Books Prescribed :*

## HISTOKY OF U.S.S.R.

(1) Academy of Science of the U.S.S.R. (Ed.) Publisher of Ministry of Education, U.S.S.R. (Ed.) Physical and Economic Geography of the U.S.S.R.

(2) Ministry Culture of the U.S.S.R. Culture Department, Embassy of U.S.S.R. Culture and Life of the U.S.S.R.

*Paper II*—the same as prescribed.

For the rest examination the course remained unchanged.

## GERMAN

(1) The duration and Paper I of Diploma examination be made 2½ hours.

(2) Paper II be as follows for Diploma Examination, 1972.

Paper (2½ hours)	
Essay (about 250 words) one topic to be selected out of five)	60 marks
Grammar	40 marks
Viva	100 marks
	<hr/>
	200 marks

Book Prescribed—No change.

(3) The following note be put in the end of the syllabus and Certificate/Diploma Examination.

“Unseen passages for summary and translation must be based on the vocabulary taught with the list.”

FRANCH : Certificate Course 1972

Two papers each of 100 marks and of two hours duration.

Paper I (a) Translation from Frence to English	30 marks	} from the prescribed book.
(b) Translation from English to French	30 marks	
(c) Grammar	40 marks	
	<hr/>	
	100 marks	

Papir II (a) Paragraph writing	20 marks
(b) Answering questions from a French passage.	20 marks
(c) Dictation (30 minutes)	30 marks
(d) Viva-voce.	30 marks
	<hr/>
	100 marks
	<hr/>

Text Book:—Mathurin Dondo:—Modern French Course.  
(1–35 lessons).

### Diploma Course, 1973.

3 Papers:—Each full paper of 100 marks & of 4 hours duration.

Paper I (a) Translation from French to English	60 marks	} 1. Both the passages will be unseen
(b) Translation from English to French	40 marks	
	<hr/> 100 marks	
		} 2. Use of dictionary may be allowed for translation only.

Paper II (a) Essay	50 marks	} One is to be written out of 5 Questions.
(b) Letter	20 marks	
(c) Grammar	30 marks	
	<hr/> 100 marks	} One is to be written out of 3 question.

Paper III (a) Dictation (45 minutes)	40 marks
(b) Viva-Voce.	60 marks
	<hr/>
	100 marks
	<hr/>

Text Book—Mathurin Dondo:—Modern French Course  
(36–70 lessons)

## APPENDIX 'B'

**Statute/Ordinances/Regulation for the Advanced Diploma Course in Russian/German/French.**

**S. 40**—Add 'Advanced Diploma Course in Russian/German/French under the heading Diplomas.

**S.121**—Add 'Advanced Diploma Course in Russian/German/French in the Diploma list.

**O. 45**—Under the heading Diploma add 'Advanced Diploma Course in Russian/German/French. Advanced Diploma Course in Russian/German/French.

A candidate who after passing the Diploma Examination in Russian/German/French of this University with 65% marks or more has completed a regular course of study shall be admitted to the examination for the Advanced Diploma Course in Russian/German and French.

**G. 65**—Minimum qualification for teachers.

In Russian— B.A. Hons. in Russian from Jawahar'lal University of Delhi.

In German/French—Same as prescribed in Diploma Examination of the University.

*Equipment*

One Typewriter, Tape Recorder, Record Player I.  
Grants for Library Books for each subject.

Recurring	1000
Non-Recurring	2500

## APPENDIX XI

(Ref. Resolution No. 21 of the Faculty of Arts dated 10-2-71)

Minutes of the meeting of the Board of Studies in English held on 23rd October, 1970 at the University Office, Jaipur.

### Present

1. Professor P.S. Sunderam (By invitation)
2. Dr. J.L. Benerji
3. Dr. N. Sahal
4. Dr. Om Prakash, Dean, Faculty of Commerce.
5. Dr. Rajendra Shanker, representing the Dean, Faculty of Science,
6. Dr. Kashi Prasad (Convener)

Since Dr. R.K. Kaul was on leave abroad, Dr. Kashi Prasad was unanimously elected Convener of the Board.

1. Under Section 34 (4) (iv) of the University Act, the Board elected Dr. J.L. Benerji as a member other than the Convener of the Board of Studies to serve on the Committee for the Selection of examiners in the subject for the year 1971.

2. No comments could be offered as the reports were not circulated in time. The Board very much regretted this lapse on the part of the office every year.

3. The Board scrutinised the statements of qualifications and teaching experience etc. of teachers (received from University Teaching Departments, University Colleges, affiliated institutions and other Universities) for inclusion in the revised panel of examiners for 1971 and revised the panel accordingly.

4. The Board recommended courses of Study and text books in Sanskrit for the following examinations together with changes in Regulations and Ordinances, if any :—(vide Appendix A).

1. Pre-University Examination, 1972.
2. B.A./B.Sc./B.Com. Pass First Year Exam. of 1972.
3. B.A. (Pass) Second Year Examination of 1973.

4. B.A. (Pass) Final Year Examination of 1974.
5. M.A. Prev. and/or Final Examination of 1972 and 1973 respectively.
6. B.A. ( Hons. ) Pt. I & II Exam. of 1973-74.

5. The Board considered the following suggestions of the Vice-Chancellor made by him in consultation with the Convener of the Examinations Reforms Committee :—

- A. Regarding award of Sessional marks, these may be awarded on the basis of Articulation, Comprehension and Objective Tests of the students as per details given below :

*Articulation—4 marks*

Each student may be required to write atleast one essay on the subject each term. This may be assessed by 2 independent teachers independently and marks recorded. Marks may be declared publicly and if any student feels aggrieved, he may be explained what that particular award given.

*Comprehension—3 marks*

A test may be conducted each term to examine whether the students have picked up the appropriate expression, and have understood the subject matter.

*Objective test—3 marks*

Under this category marking may be done but the marks may not be shown to the candidate. But the solution may be written by the teacher and posted on the notice board so that the students may know the correct answers. If this rational basis is adopted there is a change of increasing the quantum of internal assessment.

- B. As regards syllabus at the Post-graduate level, I suggest that—

- (i) a list of full and half courses may be prepared according to the availability of teaching competence.
- (ii) it may be possible for a student to offer two full courses as a topic to give specialisation in that topic. Such a student would prepare himself for research in this topic.

(iii) a student who wishes to learn the subject for becoming a teacher, he may offer 4 half courses covering a variety of topics to have an extensive view of the subject. In fact the students may have to choose one full and two half courses.

C. For very few bright students it may be suggested that they may be encouraged to do some self-study on pre-assigned topics which are not included in their curriculum and they may be assessed entirely on that as far as sessional marks are concerned.

Resolved to recommend that (A) in awarding sessional marks care should be taken of the student's capacity for expression and comprehension, and there need not be any objection to objective tests. It is not clear why the results of objective should be not revealed to the student.

The Colleges and departments concerned may be asked to mark the candidates on these lines, although with 10 marks as maximum these minutes appear somewhat comic. The quantum of marks has, therefore, to be increased.

(B) As the intention seems to be to separate the research oriented student from one whose aim or capacity is not research-wards but teaching. The Board wonders whether a student on joining the M.A. class will be in position to know which of these two branches he will be better at. Also the course as at present seems to be the minimum for any worth while teaching or research, the specialization suggested should be after the M.A. rather than during the M.A. Course.

6. It was reported that Academic Council, vide its Res. No. 35 dated 21-4-70 accepted the following draft resolution prepared by Dr. Dayakrishna, Chairman, Examination Reforms Committee vide his letter No. Acd/c/1082 dated 17-4-70 as a result of discussions in the meeting of the Examination Reform Committee held on 17th April, 1970 :—

“Resolved that in the interest of raising standards of teaching and examinations and award of degrees the Board of Studies may prepare alternative Schemes of courses and Examinations in their respective subjects to be implemented as early as possible.”



*Resolved to recommend that* the scheme be put for consideration before the teachers of the Department and Colleges.

8. The Board considered the proposal received from Dr. R.K. Kaul as contained in his letter No. 1247/70, dated 31st July, 1970 to the effect that an additional optional paper in English in the Faculty of Science and Commerce be also introduced for the Second and Final Year T.D.C. Examinations of 1972 and 1973.

Resolved to recommend that the above proposal be accepted and the same be referred to the Faculties of Science and Commerce. Necessary amendments in the relevant Ordinances be also made.

9. The Board considered a complaint dated 30th March, 1970 received from the Head of the Department of English, Government College, Ajmer against the question paper General English of First Year T.D.C. Examination along-with the remarks of the paper-setter.

Resolved that instruction to the paper-setter be sent that while setting questions on comprehension, he should be aware of the standard of students general interest.

10. The Board considered a complaint dated the 16th May, 1970 received from Shri M.M. Rai Jami, Lecturer in English, through Head of the University Department of English, Jaipur against the question paper VIII (Wordsworth) of M.A English examination, alongwith the remarks of the paper-setter to whom a reference was made.

The Board felt that the passages for an notation should have been set from the prescribed book alone.

11. The Board considered the following proposals contained in the letter dated the 2nd February, 1970 from Dr. Sumit Kumar Chatterjee, President. Sahitya Academy, 16, Hindustan Park, Calcutta-29 forwarded by the Secretary National Academy of letters, Rabindra Bhawan, New Delhi.

1. A course in Comparative Indian Literature be provided at Honours and Post-graduate Levels in all Indian Universities.
2. Literature Courses at Honours and Post-graduate levels in all Indian Universities should provide as part and parcel of the Syllabus,

study of translations in the candidates mother tongue of such Indian classics as are originally written in languages other than his own.

The proposals do not apply to this Board.

12. The Board considered a suggestion of Shri V.D. Singh, Lecturer in English. University of Rajasthan as contained in his letter No. 1506/70, dated the 10th September, 1970 that a scheme be evolved for remedial teaching in English to all the students in the II and IIIrd Year T.D.C classes who have not yet cleared the compulsory subject General English prescribed for the First Year T.D.C Examination.

The Board felt that in order to obviate a large number of failures at the end of the third year, remedial teaching in the subject should be given in the II & III Year T.D.C. classes to those students who could not pass in the compulsory General English paper. This is of course subject to the teaching facilities being available.

The meeting ended with a vote of thanks to the chair.

Sd/-Kashi Prasad

Convener.

## APPENDIX A

- (1) P.U.C.—No Change.
- (2) B.A./B.Sc./B.Com. *I Year examination of 1972*  
(General English)  
on page 4, list as follows :—

*Books Recommended :*

- (1) For Language and Usage :
- (i) *An Intermediate English Practice Books* by S. Pit/Corder (Longmans).
  - (ii) *A Remedial English Grammar for Foreign Students.* by F.T. Wood (Macmillan)
  - (iii) *English for India* by R.P. Bhatnagar, Jain Pustak Mandir, Jaipur.

- (2) For comprehension and vocabulary :

*A Journey to the Centre of the Earth* by Jules Verne (Longman's simplified series.)

*Doctor in the House* by Richard Gordon (Longmans' Simplified Series).

*Note* :—Questions on comprehension will not be content oriented. They will merely test the students' general reading-skill by direct and multiple-choice questions.

- (3) I Year T.D.C. English Literature :

Drop Shakespeare : *A Mid-Summer Night's Dream* and include Shakespeare : *Merchant of Venice* (Detailed Study).

Drop *the Guide* by R.K. Narayan and include Goldsmith : *The Vicar of Wakefield* (non-detailed).

Poems from *Fifteen Poets* (oxford) to be written in the follo-

wing order : (2), (4), (5), (6), (3),  
(1).

- (4) II Year T.D.C. English Literature : (Pass Course, There shall be two papers each of three hours duration and each carrying 100 marks.

Paper I (English, Drama and Poetry)

- |                                   |          |
|-----------------------------------|----------|
| (i) Drama and Poetry              | 80 Marks |
| (ii) Comprehension and<br>grammar | 20 Marks |

Paper II (Prose, including short stories)

- |                                   |          |
|-----------------------------------|----------|
| (i) Prose and short stories       | 80 Marks |
| (ii) Comprehension and<br>grammar | 20 Marks |

Paper I From *Fifteen Poets*, Oxford University Press.

An Essay on Criticism.

Epistle to Dr. Arbuthnot.

Tennyson : *Lancelot and Elaine* (De-tailed).

Galsworthy : *Loyalties* (Non-De-tailed).

Comprehension : (to test the candidates' ability to understand literary texts in verse.)

Grammar : Model auxiliaries & Phrasal verbs.

Paper II :

- (a) Twentieth Century Prose by A.C. Ward (E.L.B.S.) Lessons 1 to 16.
- (b) H.G. Wells : *Short Stories* (First Series) Nelson
- (c) Thomas Hardy : *Far From the Madding Crowd*.

or

Maugham :

*Cakes and Ale*

Comprehension : (to test the candidates' ability to understand literary texts in prose).

Grammar : Indirect style of narration.

*Note* : *Pride and Prejudice* (Macmillans) and *English Prose Selections* by Bhalla and Shiv Kumar are dropped as the scheme of the two papers is radically changed.

(5) B.A. (Pass) Final Year : No Change.

(6) B.A. Hons. Part I & II.

On page 193 under Paper IV recast as under.

Paper IV : English Social History

Books recommended :

(i) *English Social History* by G.M. Trevelyan.

(ii) *English History* by G.M. Trevelyan.

(6) M.A. (Previous)

Paper I : (Modern English Usage and Language)

Part I—Language, its nature and varieties :

(i) Language, Linguistics, Literature.

(ii) Processes of Language Learning : innate ability and Socially acquired habits, Learning a second language text-based language learning, bilingualism.

(iii) Linguistic relations : 'structure', 'system', 'transformation.'

(iv) Language varieties: Dialects, Register, Style.

- (v) Levels of linguistic analysis : Phonetics, Phonology, Grammar (Syntax and Morphology), Semantics.

Part II—Contemporary English Grammar and Usage :

- (i) Sentence structure : types of major and minor sentences cohesive devices, topicalization.
- (ii) Infinitival and participial constructions.
- (iii) Determiners, tenses, modal auxiliaries, Prepositions and adverbials.
- (iv) Compound and complex sentences.

Part III—Phonetics and Spoken English :

- (i) The speech mechanism.
- (ii) The description and classification of speech sounds : vowels and consonants, phonetic symbols (I.P.A.)
- (iii) The phoneme; prosodic features.
- (iv) Question of standards in Indian Spoken English; intelligibility.
- (v) Phonological descriptions of :—
  - (i) Standard Indian English.
  - (ii) British Received Pronunciation.
- (vi) Word accentual patterns.
- (vii) Patterns of stress, rhythm and intonation in connected speech.

*Practical Work—*

- (i) Ear training exercises.
- (ii) Practice in vowel and consonant sounds in isolation and in words.
- (iii) Practice in stresses, rhythm and intonation patterns.
- (iv) The reading of passages, including conversations, extracts from plays, and poems.
- (v) The use of a pronouncing dictionary.

## (vi) Phonetic/Phonemic transcription.

Note—There shall be an oral test relating to Part III.

Part IV : The writing of English and Literary Appreciation including Stylistics.

Books recommended remain the same.

Paper II : In Place of *Alchemist* include *Every Man in his Humour*.

Paper III : In place of *The School for Scandal* include *The Rivals*.

Paper IV : No Change.

M.A. (Final)

Papers I & II—No Change.

Paper III

T.S. Eliot : Delete all the poems except *Gerontion* and add *Four Quartets*.

Drop James Joyce : *Portrait of the Artist as a Young Man*. Include Bernard Shaw : *Back to Methuselah* in place of Shaw's *Saint Joan*.

Paper IV : Add After American Literature or one of the following—

(iii) A Specialized study of *either* Milton or Wordsworth Syllabus :

MILTON

For detailed study

Paradise Lost, Paradise Regained, Comus

Lycidas

For general study

K.M. Burton, ed., *Milton's Prose Writings*, (Everyman) with special reference to *Areopagitica*, of Education and Autobiographical Extracts.

OR

WORDSWORTH

For detailed study

Lyrical bailads (1798) alongwith the

‘Preface’ (1800)

The Prelude, 1805.

For non-detailed study

Selection by M. Arnold

P. Whyne, ed; Letters of William Wordsworth

(The World’s Classics).

- (7) Post M.A. Diploma & Higher Proficiency Certificate Course :

No Change.



## APPENDIX XII

*Ref. Vide Faculty of Arts Res. No. 21 of 10-2-71)*

Minutes of the Meeting of the Board of Studies in Hindi held on 30th September 1970, at 12 noon, at the University Office, Jaipur.

## Present

- |                         |          |
|-------------------------|----------|
| 1. डा. सरनाम सिंह       | (संयोजक) |
| 2. श्री बाल गंगाधर      |          |
| 3. श्री गुलजारी लाल जैन |          |
| 4. डा. सोमनाथ गुप्ता    |          |
| 5. डा. कन्हैयालाल सहल   |          |

1. Under Section 34 (4) (iv) of the University Act, the Board elected Dr. Somnath a member other than the convener of the Board of Studies to serve on the Committee for the Selection of examiners in the subject for the year 1971. The name was proposed by Shri Balgangadhar and seconded by Shri G.L. Jain.

2. The Board did not offer comments after going through the reports of examiners and question papers set for the examination of 1970, as the same were not circulated in advance.

3. The Board scrutinised the statements of qualifications and teaching experience etc. of teachers (received from University Teaching Departments, University Colleges, affiliated institutions and others Universities) for inclusion in the revised panel of examiners for 1971 and revised the panel accordingly. यह प्रस्ताव किया गया कि जिन लोगों के संबंध में पूरी सूचना नहीं है उनको परीक्षा के लिए उपयुक्त समझा न जावे ।

4. पोस्ट एम. ए. डिप्लोमा इन लिनक्वीस्टीक के पाठ्यक्रम के संबंध में डा. सरयुप्रसाद अग्रवाल, लखनऊ व डा. उदयनारायण तिवारी, जबलपुर, श्री हरिवल्लभ भाभाणी, अहमदाबाद एवं पं. देवेन्द्रनाथ जर्मा आदि के पास इस विश्वविद्यालय का पाठ्यक्रम भेजकर उसके सम्बन्ध में अनेक सुझाव मांग लिए जायें । अन्य कोर्स के सुझाव जो कि विभिन्न कालेजों ने प्राप्त हुए हैं उनकी प्रतिलिपियां बोर्ड के सदस्यों के पास भिजवा दी जावे ।

5. The Board considered the following suggestions of the Vice-Chancellor made by him in consultation with the Convener of the Examinations Reforms Committee :—

- A. Regarding award of Sessional marks. these may be awarded on the basis of Articulation, Comprehension and Objective Tests of the student as per detail given below :

*Articulation—4 marks*

- Each student may be required to write atleast one essay on the subject in each term. This may be assessed by 2 independent teachers independently and marks recorded. Marks may be declared publicly and if any student feels aggrieved he may be explained why that particular award given.

*Comprehension—3 marks*

A test may be conducted each term to examine whether the students have picked up the appropriate expression, and have understood the subject matter.

*Objective Test—3 marks*

Under this category marking may be done but the marks may not be shown to the candidate. But the solution may be written by the teacher and posted on the notice board so that the students may know the correct answers. If this rational basis is adopted there is a change of increasing the quantum of internal assessment.

- B. As regards syllabus at the Post-graduate level it is suggested that—

- ( i ) a list of full and half courses may be prepared according to the availability of teaching competence.
- ( ii ) it may be possible for a student to offer two full courses as a topic to give specialisation in that topic. Such a student would prepare himself for research in this topic.

- (iii) a student who wishes to learn the subject for becoming a teacher, he may offer 4 half courses covering variety of topics to have an extensive view of the subject. In fact the students may have to choose one full and two half courses.

- C. For very few bright students it may be suggested that they may be encouraged to do some self-study on pre-assigned topics which are not included in their curriculum and they may be assessed entirely on that as far as sessional marks are concerned.

Resolved that :—

- (a) हिन्दी के परीक्षार्थियों की संख्या अत्यधिक होने से यह एकीकरण प्रस्ताव अव्यावहारिक होगा ।
- (b) बोर्ड का यह मत है कि यह सुझाव व्यावहारिक दृष्टि से उपयुक्त एवं संभव नहीं प्रतीत होता ।
- (c) बोर्ड इस प्रस्ताव से सहमति नहीं रखता ।

6. It was reported that Academic Council, vide its Res. No. 35 dated 21-4-70 accepted the following draft resolution prepared by Dr. Dayakrishna, Chairman, Examination Reforms Committee vide his letter No. Acd, c, 1082 dated 17-4-70 as a result of discussions in the meeting of the Examination Reform Committee held on 17th April, 1970 :—

“Resolved that in the interest of raising standards of teaching and examinations and award of degrees the Board of Studies may prepare alternative Scheme of courses and Examinations in their respective subjects to be implemented as early as possible.”

प्रस्तावित किया कि उपरोक्त प्रस्ताव के विषय में स्पष्टीकरण अपेक्षित है । स्पष्टीकरण आने पर ही कोई निर्णय लिया जा सकता है ।

7. The Board considered the suggestion of the Kanodiya Sanskrit Parishad for providing atleast one compulsory paper in Sanskrit in the curricula of Modern Indian Languages as the Post-graduate level as contained in the Letter No. F.

18-4-70Sk dated the 17 July, 1970 from the Ministry of Education of youth Services, Govt of India.

प्रस्तावित किया कि एम. ए. हिन्दी के ७ वें प्रश्न-पत्र में (ख) आधारभूत भाषा के अन्तर्गत संस्कृत का ऐच्छिक विषय के रूप में पहले से ही प्रावधान है ।

8. The Board considered a complaint dated 8th May, 70 received from student through Head of the Univ. Deptt., Jaipur against the question paper VII Hindi 'नाटक का उद्भव और विकास' of M.A. Hindi examination along with remarks of the paper setter to whom a reference was made.

सिफारिश की कि बोर्ड परीक्षा के प्रश्न-पत्र से सहमत है । अच्छा होता कि आगे कुछ अधिक विकल्प रखे जावें तथा नाट्य शास्त्र पर कोई सीधा प्रश्न न पूछा जावे ।

9. The Board considered a complaint dated nil received from student of Dayanand College, Ajmer against the question paper III of M.A (Hindi) examination, alongwith the remarks of paper setter.

प्रस्तावित किया कि यह उचित है कि परीक्षक निर्धारित संस्करण तक ही अपने को सीमित रखे । इस संबंध में संयोजक द्वारा कार्यालय को भेजे हुए पत्र पर विचार करने के उपरान्त यह निर्णय लिया गया ।

10. The Board considered the following proposals contained in the letter dated feb. 2. 1970 from Dr. S. K. Chatterji President Sahitya Adademi 16, Hindustan Park, Calcutta-29 forward by the Secretary National Academy of letters Rabin-dra Bhawan, New Delhi.

1. A course in Comparative Indian Literature be provided at Honours and Post-graduate levels in all Indian Universities.
2. Literature courses of Honours and Post-graduate levels in all Indian Universities should provide, as part and parcel of the syllabus, study of translations to the candidate's mother-tongue of such Indian classes are originally written in languages other than his own.

प्रस्तावित किया कि बोर्ड डा० चटर्जी की भावना से सहमत है। परन्तु व्यावहारिक कठि- नाई यह है कि वर्तमान पाठ्यक्रमको देखते हुए अध्ययन के इस अधिक भार को वहन करने के लिए यह आवश्यक है कि इस बात का स्पष्टीकरण किया जावे कि तुलनात्मक अध्यापन में कितनी भाषाओं अथवा भाषाओं के अनुवाद का अध्ययन आवश्यक है अर्थात् प्रश्न एक विश्वविद्यालय का नहीं समस्त भारत के विश्वविद्यालयों का है।

11. वी० ए० आनर्स (हिन्दी) भाग I में तृतीय प्रश्न-पत्र में रसों का जितना अंश 1970 की परीक्षा में था वही आगे 71 या 72 की परीक्षा के लिए भी रहे।

मीटिंग की कार्यवाही समाप्त हुई।

डा. सरनाम सिंह  
कनवीनर

दिनांक २७-२८ जनवरी, सन् १९७१ को विश्वविद्यालय के प्रशासकीय भवन में हुई हिन्दी पाठ्यक्रम-समिति की बैठक में लिये गये निर्णयों का विवरण :

उपस्थित :

- (१) श्री गुलजारी लाल जैन
- (२) श्री बाल गंगाधर
- (३) डा० सोमनाथ गुप्त
- (४) डा० कन्हैयालाल सहल
- (५) डा० ब्रह्मदत्त त्यागी (विज्ञान संकाय के डीन द्वारा मनोनीत)
- (६) डा० सरनामसिंह शर्मा (संयोजक)

कार्यक्रम के अनुसार समिति द्वारा निम्नलिखित विषयों से सम्बन्धित निर्णय लिये गये—

१. बोर्ड का यह मत है कि जो पाठ्यक्रम डा० उदय नारायण तिवारी और डा० भायाणी ने सुझाव रूप में भेजा है उस पर मनन करने के पश्चात् इस समिति ने अपना एक पाठ्यक्रम बनाया है उसे सम्मत्यर्थ उक्त दोनों विद्वानों के पास भेज दिया जाये और उनकी सम्मति आने पर ही निर्णय लिया जाये । इस बीच में पुराना पाठ्यक्रम हो चालू रहेगा ।

२. बोर्ड ने संस्थाओं एवं व्यक्तियों द्वारा भेजे गये सुझावों पर विचार किया । छात्रों द्वारा भेजे गये सुझावों आदि पर भी विचार करने के उपरान्त निम्नलिखित निर्णय पाठ्यक्रम इत्यादि के सम्बन्ध में लिये गये ।

(पाठ्यक्रम पी० यू० सी० से एम० ए० तक संलग्न है)

३. आज राजस्थान विश्वविद्यालय के विद्यार्थियों ने हिन्दी पाठ्यक्रम समिति को जो ज्ञापन पाठ्यक्रम में परिवर्तन हेतु दिया है उस पर पूर्ण विचार करने के उपरान्त समिति का मत इस प्रकार है :—

( i ) समिति विद्यार्थियों की भावनाओं से अविकाशतः सहमत है, परन्तु उसकी अपनी वैधानिक सीमाएं हैं । फिर भी समिति उन भावनाओं को कार्यान्वित करने में तटस्थ नहीं है । जो कुछ सम्भव हो सक रहा है, उसमें यह सक्रिय है ।

( ii ) स्नातकीय पाठ्यक्रम के प्रथम वर्ष में हिन्दी और अंग्रेजी दोनों भाषाएँ अनिवार्य हैं, किन्तु द्वितीय और तृतीय वर्ष के पाठ्यक्रम में वे अनिवार्य नहीं हैं, परिणामतः उनको आगे की कक्षाओं में अध्ययन करते समय भाषा में अनिव्यक्ति की दक्षता पाने के लिए कोई आपत्ति नहीं है। इस बात को ध्यान में रख कर ही पहले भी समिति ने द्वितीय एवं तृतीय वर्ष में हिन्दी भाषा को अनिवार्य करने के लिए अपना सुझाव दिया जो कला संकाय में पारित होने पर भी अकादमिक परिषद् द्वारा स्वीकृत नहीं किया गया। अतः समिति का मत है कि छात्रों की मांग को ध्यान में रखते हुए हिन्दी भाषा को स्नातकीय पाठ्यक्रमों के द्वितीय और तृतीय वर्षों में अनिवार्य कर दिया जाये।

( iii ) इस समिति की यह राय है कि पाठ्यक्रम समिति में विचारियों के प्रतिनिधित्व के सम्बन्ध में समिति को निर्णय लेने का कोई अधिकार नहीं है, अतएव उनकी मांगों को मौलिक रूप में रजिस्ट्रार के पास प्रेषित कर दिया जाये।

४. समिति ने विशेष परिस्थितियों को ध्यान में रखकर एन० ए० के पाठ्यक्रम के सम्बन्ध में एक विशेष प्रस्ताव पारित किया जो संलग्न है।

सरमान सिंह गर्मा

( संयोजक )

पी० यू० सी० परीक्षा, १९७२

( सामान्य हिन्दी )

इसमें एक प्रश्न-पत्र १०० अंक का होगा तथा ३ घंटे का होगा ।

१) पाठ्यग्रन्थ	५० अंक
२) व्याकरण	१५ अंक
३) निबन्ध	१५ अंक
४) पत्र-लेखन	१० अंक
५) संक्षिप्तीकरण	१० अंक

प्रश्नों का अंक विभाजन इस प्रकार होगा :—

क) एक प्रश्न व्याख्या सम्बन्धी	२० अंक
ख) सामान्य प्रश्न दो (गद्य और पद्य दोनों से सम्बन्धित)	३० अंक
ग) एक प्रश्न निबन्ध से सम्बन्धित	१५ अंक
घ) एक प्रश्न में ये सम्मिलित होंगे :	
१) व्याकरण	१५ अंक
२) पत्र-लेखन	१० अंक
३) संक्षिप्तीकरण	१० अंक

व्याकरण : (व्याकरण का अव्ययन अभ्यास के माध्यम से कराया जावेगा) (दुहराने के लिए—संज्ञा, सर्वनाम, विशेषण, क्रिया-विशेषण का पदान्वय) । उपसर्ग-प्रत्यय-विचार, कारक, वचन तथा लिंग विषयक त्रुटियों का ज्ञान, सरल तथा संयुक्त वाक्यों का अन्तर, उनका वाक्य-विश्लेषण सरल तथा जटिल वाक्यों से संशोधन का अभ्यास । संवि तथा समास ।

(क) पाठ्य पुस्तकें:—

अ) गद्य

(१) गद्य भारती—सम्पादक ओमप्रकाश, प्रकाशक—भारती साहित्य मन्दिर, दिल्ली । मू० २-५०



निम्नलिखित पाठ छोड़ दिये जायें :—

- १) कुमार अजातशत्रु
- २) भय
- ३) चीनी भाई
- ४) नवीन सामाजिक व्यवस्था
- ५) मालव प्रेम
- ६) तिरुवल्लुर
- (आ) पद्य

(१) पंचवटी, श्री मैथिलीशरण गुप्त, प्रकाशक—साहित्य मन्त्र,  
चिरगांव, भांसी ।

(ख) सामान्य अध्ययनार्थ—उपन्यास—“अधिकार का प्रश्न” लेखक—भगवती  
(इसमें केवल प्रश्न प्रसाद बाजपेयी, प्रकाशक—एस० चांद एण्ड कं०,  
पृष्ठे जायेंगे) नई दिल्ली, मूल्य २-५० पैसे मात्र ।

अथवा

एकांकी—“नया पुराना”

लेखक—डा० के० एल० जर्मा

प्रकाशक—जतन पब्लिशिंग हाउस, जयपुर ।

मूल्य—२-२५ पैसे मात्र ।

(ग) संक्षिप्तीकरण, व्याकरण तथा रचना के लिए सहायक पुस्तकें :—

१) संक्षिप्तीकरण कला—लेखक—डा० जे० पी० जर्मा  
प्रकाशक—कॉलेज बुक डिपो, जयपुर ।  
मूल्य— १-२५ पैसे मात्र ।

२) राष्ट्रभाषा व्याकरण तथा रचना

लेखक—डॉ० वचनदेव कुमार “विकल”

प्रकाशक—हिन्दी साहित्य संसार, बंगलौर रोड, दिल्ली ।

मूल्य १-५० पैसे मात्र ।

३) सरल व्याकरण और रचना

लेखक—व्यथित हृदय, संशोधनकर्ता डॉ० अम्बा प्रसाद “मुमन”

प्रकाशक—श्रीराम मेहरा एण्ड कं०, आगरा ।

मूल्य २-५० पैसे मात्र ।

पी० यू० सी० परीक्षा, १९७२  
(प्रारम्भिक हिन्दी) (Elementary Hindi)

एक पर्चा १०० अंकों का होगा, जिसका समय ३ घण्टे होगा । इसका पाठ्यक्रम तथा अंक वितरण इस प्रकार होगा ।

क	गद्य पद्य	—	५० अंक
ख	रचना	—	२५ अंक
ग	व्याकरण	—	२५ अंक

पाठ्य पुस्तक—

१) गद्य ज्योत्स्ना—सम्पादक—अमरचन्द्र वर्मा, प्रकाशक—किताबें  
महल, मूल्य १-५० पैसे मात्र ।

२) मधुपर्क ( कहानी )—सं० ना० नागप्पा, प्रकाशक—नीलाभ  
प्रकाशन, मूल्य २-५० पैसे मात्र ।

३) हिन्दी व्याकरण प्रवेश—ले० श्री चन्द्रहासन  
(रामनारायण लाल वेनी प्रसाद, इला-  
हाबाद । मू० रु० १-५० पैसे मात्र ।

विषय—शुद्ध भेद तथा उसका परिचय लिंग, वचन, पुरुष का ज्ञान ।

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पी० यू० सी० परीक्षा, १९७०  
( हिन्दी साहित्य )

सन् १९७१ की परीक्षा के लिए निर्धारित पाठ्यक्रम के अनुरूप ।

छंद—१९७१ की परीक्षा के अनुसार ।

निम्नलिखित अलंकार पाठ्यक्रम में जोड़ दिये जाएँ :

उपमा, उत्प्रेक्षा, रूपक, श्लेष, यमक तथा अनुप्रास ।

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प्रथम वर्ष टी० डी० सी० परीक्षा, १९७२

सामान्य (अनिवार्य) हिन्दी

एक प्रश्न-पत्र १०० अंकों और ३ घण्टे का होगा। इसमें केवल दो पुस्तकें होंगी : (१) निबन्ध संग्रह तथा (२) गद्य संग्रह।

नोट :— इन पुस्तकों का उद्देश्य यह होना चाहिए कि भाषा-ज्ञान के अतिरिक्त छात्र को विविध विषयों का सामान्य ज्ञान भी हो सके, जैसे—आधुनिक विज्ञान, कला, वाणिज्य एवं संस्कृति।

विवरण एवं अंक विभाजन :—

(१) पाठ्य-विषयों के बीच की—परीक्षा के लिए एक-एक पुस्तक पर आवृत्त एक-एक प्रश्न होगा। इन दो प्रश्नों के लिए ३० अंक होंगे।

(२) एक निबन्ध २० अंकों का होगा।

(३) एक प्रश्न संक्षिप्तीकरण से सम्बन्धित होगा जिसके १५ अंक होंगे।

(४) एक प्रश्न प्रालेख (Draft या मसविदा) से सम्बन्धित होगा जिसके १५ अंक होंगे।

(५) एक प्रश्न व्यावहारिक व्याकरण एवं वर्तनी से सम्बन्धित रहेगा। इसके लिए २० अंक होंगे। इस प्रश्न से सम्बन्धित विषय ये होंगे—उपसर्ग, प्रत्यय, संधि, समास, वाक्य-शोधन तथा वर्तनी।

पाठ्य-पुस्तकें :

(१) निबन्ध-संग्रह—

निबंधावली—डॉ० ताराचन्द शर्मा,

प्रकाशक—साहित्य सदन, धीया मंडी, मयुरा,

मूल्य २.३० पैसे मात्र।

(२) गद्य-संग्रह—

गद्य—साहित्य के विविध रूप

सम्पादक—जुगमन्दिर तायल,

प्रकाशक—भारत पब्लिशिंग हाउस, जयपुर ।

मूल्य २.५० पैसे मात्र ।

(३) व्याकरण—

सहायक पुस्तकें

(क) हिन्दी भाषा ज्ञान एवं निबन्ध रचना—

लेखक—रमाशंकर त्रिपाठी तथा देवी प्रसाद गुप्त,

अजमेरा बुक कम्पनी, जयपुर ।

मूल्य ३.७५ पैसे के स्थान पर ३ रु० ) रखा जाये ।

(ख) सुदोष हिन्दी व्याकरण और रचना—

लेखक—डॉ० नरेन्द्र भानावत और डा० भंवरलाल

जोशी, राजस्थान पुस्तक मन्दिर, जयपुर ।

मूल्य ४.५० पैसे के स्थान पर ४ रु०

होना चाहिये । पुस्तक सजिल्द है ।

(ग) वृद्धीकरण, संक्षिप्तीकरण एवं प्रालेख विधि

लेखक—डा० जगदीशचन्द्र जोशी तथा हरिचरण

शर्मा, प्रकाशक—अजमेरा बुक डिपो,

जयपुर ।

मूल्य २.५० पैसे के स्थान पर २ रु० होना

चाहिये ।

प्रथम वर्ष टी० डी० सी० परीक्षा, १९७२

(आरम्भिक) हिन्दी  
(Elementary Hindi)

एक प्रश्न-पत्र १०० अंको का हो होगा । जिसके लिए ३ घण्टे का समय होगा ।

(१) अध्ययनार्थ पाठ्य-पुस्तकें :—

(क) निबन्ध-संग्रह

(ख) कहानी-संग्रह

(२) व्याकरण :—

शब्द-विचार, वाक्य-विन्यास, वाक्य-खण्ड, पद-क्रम का ज्ञान  
तथा इनमें होने वाली सामान्य त्रुटियों का ज्ञान ।

(३) रचना :—

(क) मुहावरे तथा लोकोक्तियों का प्रयोग, काव्य में रिक्त स्थानों  
की पूर्ति, समान दीखने वाले शब्दों का अर्थ-भेद और  
उनका वाक्यों में प्रयोग ।

(ख) पत्र-लेखन अथवा सरल निबन्ध ।

अंक विभाजन—

(१) पुस्तकों पर आधारित	५० अंक
(२) व्याकरण से सम्बन्धित	२५ अंक
(३) रचना से सम्बन्धित	२५ अंक
(क) लोकोक्तियों तथा मुहावरे आदि	१० अंक
(ख) पत्र-लेखन अथवा निबन्ध	१५ अंक

पाठ्य-पुस्तकें—

(क) निबन्ध संग्रह

(१) सुगम हिन्दी गद्य—सम्पादक सूरजभान,

प्रकाशक—राजपाल एण्ड संस

मूल्य—१) मात्र

(ख) कहानी संग्रह—

(२) नौ कहानियां—सं०-डा० सत्येन्द्र,

प्रकाशक—अनिल प्रकाशन, भरतपुर ।

मूल्य २) मात्र

(ग) व्याकरण एवं रचना—

- (१) सुबोध—व्याकरण एवं रचना—सं० श्री व्यथित हृदय  
संशोधनकर्त्ता—डा० अम्बाप्रसाद सुमन ।  
प्रकाशक—श्रीराम मेहरा एण्ड कम्पनी,  
मूल्य ३) रु० के स्थान पर २.५० होना  
चाहिये ।

प्रथम वर्ष टी० डी० सी० परीक्षा, १९७२

( हिन्दी वैकल्पिक )

एक प्रश्न-पत्र १०० अंकों का होगा तथा समय ३ घण्टे हौगा ।  
यह गद्य कविता तथा कथा (लघु कहानी) पर होगा ।

पाठ्य ग्रन्थ :—

- (१) गद्य कुसुमांजली—डा० भंवरलाल जोशी, प्रकाशक—साहित्य  
सदन, जयपुर ।  
मूल्य २.८० पैसे के स्थान पर २.५० पैसे कर  
दिया जाये ।

- (२) गल्प दर्शिका— सं० एम. एल. गर्ग एवं कमला भटनागर  
प्रकाशक—कॉलेज बुक डिपो जयपुर ।  
मूल्य २.५० पैसे मात्र ।

- (३) काव्य धारा— सं० गुरु प्रसाद टण्डन  
(कवि निराला, नवीन एवं महादेवी वर्मा की  
कविताएं छोड़कर)  
प्रकाशक—साहित्य प्रकाशन मन्दिर,  
ग्वालियर ।  
मूल्य ३) मात्र ।

- (४) राय पिथौरा— लेखक—श्री भगवतीप्रसाद वाजपेयी,  
प्रकाशक—श्री भारत भारती प्राइवेट लिमिटेड,  
दरियागंज, दिल्ली । मूल्य ३) रु० के स्थान  
पर २.५० पैसे होना चाहिये ।

सहायक पुस्तकें—

- (१) हिन्दी नाटक—डा० वच्चनसिंह (चौखामा संस्कृत सीरीज, वाराणसी ।
- (२) हिन्दी गद्य विकास और परम्परा—डा० पद्मसिंह जर्मा “कमलेश” ।
- (३) हमारे कवि—राजेन्द्रसिंह गौड़ ।

द्वितीय वर्ष टी० डी० सी० परीक्षा, १९७३

(वैकल्पिक हिन्दी)

दो प्रश्न-पत्र होंगे । प्रत्येक प्रश्न-पत्र १०० अंक का होगा तथा प्रत्येक का समय ३ घण्टे होगा ।

प्रथम प्रश्न पत्र (पद्य)

(१) काव्य विभा—सम्पादक—डा० नेमिचन्द्र श्रीमाल,

प्रकाशक—कॉलेज बुक सेंटर, बम्बई—१६ । मूल्य  
२-७५ पैसे के स्थान पर २-५० पैसे होने  
चाहिये ।

नोट :—इस प्रश्न-पत्र में काव्य-शास्त्र से सम्बन्धित ये विषय होंगे ।

- (१) काव्य दोष-श्रुति-कटुत्व, ग्राम्यत्व, अक्रमत्व, दुष्कमत्व, च्युतसंस्कृति, विलम्बत्व, अप्रतीतत्व ।
- (२) शब्द-शक्तियों का सामान्य बोध ।
- (३) गुण-ओज, माधुर्य एवं प्रसाद ।
- (४) रीतियां-गोड़ी, पांचाली एवं वैदर्भी ।

नोट :—इस प्रश्न-पत्र के लिये सहायक पुस्तकें द्वितीय-प्रश्न-पत्र में दी गई हैं ।

## द्वितीय प्रश्न-पत्र (गद्य)

### पाठ्य-पुस्तकें

(क) उपन्यास—

स्मृति चिन्ह—लेखक—यज्ञदत्त शर्मा,  
प्रकाशक—राजस्थान पुस्तक मन्दिर, जयपुर ।  
मूल्य—४-२५ पैसे के स्थान पर ३-२५ पैसे होने चाहिये ।

(ख) निबन्ध —

निबन्धलोक-सम्पादक—डा० गंगाराम गर्ग  
प्रकाशक—राम प्रसाद एण्ड संस, आगरा ।  
मूल्य—२-५० पैसे मात्र ।

(ग) इतिहास आदिकाल तथा माध्यम)

(१) हिन्दी साहित्य का सरल इतिहास

लेखक—राजनाथ शर्मा,

प्रकाशक—विनोद पुस्तक मन्दिर, आगरा ।

सहायक पुस्तकें— (दोनों प्रश्न-पत्रों के लिए)

(१) हिन्दी काव्य : विश्लेषण और मूल्यांकन

सं-केसरीनारायण शुक्ल

चौखम्बा, वाराणसी से प्राप्त ।

(२) हिन्दी उपन्यास का उद्भव और विकास—

डा० प्रताप नारायण टण्डन

चौखम्बा से प्राप्त ।

(३) हिन्दी-साहित्य में निबन्ध-लेखक ब्रह्मदत्त शर्मा,

प्रकाशक-गयाप्रसाद एण्ड संस, आगरा ।

(४) काव्य प्रदीप—डा० रामबहोरी शुक्ल

हिन्दी भवन, जालंधर ।

(५) काव्यांग परिचय-लेखक-शर्मा एवं शर्मा,

प्रकाशक-अजमेरा बुक कम्पनी, जयपुर ।

मूल्य १-२५ पैसे मात्र ।



तृतीय वर्ष टी०डी० सी० परीक्षा, १९७४

(वैकल्पिक हिन्दी)

इस परीक्षा में दो प्रश्न-पत्र होंगे । प्रत्येक प्रश्न-पत्र के १०० अंक होंगे । समय ३ घण्टे होगा ।

प्रथम प्रश्न पत्र (पद्य)

अंक-विभाजन :

- (१) व्याख्या-३०-एक प्रश्न, ३ व्याख्याएं
- (२) आलोचनात्मक प्रश्न ४०, प्रत्येक पुस्तक पर एक एक एक प्रश्न
- (३) हिन्दी साहित्य का इतिहास-२०
- (४) रस-प्रक्रिया-१०

पाठ्य-पुस्तकें :—

- (१) संक्षिप्त रामचन्द्रिका—सं० डा० महेन्द्र कुमार तथा डा० चन्द्र हंस पाठक, प्रकाशक—आर्य बुक डिपो नई दिल्ली मूल्य ५) रु० के स्थान पर ४) रु० होना चाहिये ।
- (२) निर्वाण-डा० जगदीश कुमार, प्रकाशक—राधाकृष्ण, प्रकाशन दिल्ली, मूल्य २) रु० मात्र ।
- (३) आधुनिक हिन्दी साहित्य के विकास की रूपरेखा—श्री जुगमन्दिर तायल, भारत पब्लिशिंग हाउस, जयपुर । मूल्य ३) रु० मात्र ।

द्वितीय प्रश्न पत्र (पद्य)

- (१) नाटक
- (२) आलोचनात्मक निबंध
- (३) निबंध लेखन
- (१) व्याख्याएं (दोनों पुस्तकों में से) ४० अंक
- (२) दो प्रश्न पुस्तकों पर आधुत ४० अंक
- (३) निबंध लेखन १ प्रश्न २० अंक

पाठ्य पुस्तकें :—

- (१) पहला राजा—ले० जगदीश चन्द्र माधुर,  
प्रकाशक—राधा कृष्ण प्रकाशन, नई दिल्ली  
मूल्य ३ रु० मात्र ।

- (२) आलोचनात्मक निबन्ध—सम्पादक-डा० रामचन्द्र मिश्र,  
प्रकाशक-रंजन प्रकाशन. आगरा-३ ।  
मूल्य ३ रु० मात्र  
( ३-२५ के स्थान पर )

सहायक पुस्तकें—

- (१) काव्य प्रदीप—डा० रामवहोरी शुक्ल ।  
(२) नाट्य सिद्धान्त—डा० दशरथ ओझा  
प्रकाशक-नेशनल पब्लिशिंग हाउस, दिल्ली ।  
मूल्य ६) रु० मात्र ।  
(३) निबंध—हिन्दी साहित्य में निबंध—ले० ब्रह्मदत्त शर्मा ।  
प्रकाशक-गया प्रसाद एण्ड संस,  
मूल्य ३) रु० मात्र ।

(४) साहित्यिक निबंध—डा० गणपति चन्द्र गुप्त

५ (ई) (ii)—हिन्दी (आनर्स)-भाग १ परीक्षा १९७२

इस परीक्षा में चार प्रश्न पत्र होंगे तथा प्रत्येक प्रश्न-पत्र के १०० अंक होंगे । जिसके लिए ३ घण्टे का समय निर्धारित होगा ।

पाठ्य-ग्रंथ—

प्रथम प्रश्न-पत्र—आधुनिक काव्य—

१. मैथलीशरण गुप्त-यशोवरा ।
२. जय शंकर 'प्रसाद'-आंसू ।
३. डा० रामकुमार वर्मा-'एकलव्य'-(नवें सर्ग के अंत तक)

द्वितीय प्रश्न-पत्र—मध्यकालीन काव्य (सगुण एवं सूफी) :—

१. नन्द दास-मंवरगीत
२. मंभन-मधुमालती (संपा० शिवगोपाल)

तृतीय प्रश्न पत्र—संत काव्य :—

- |              |   |                   |
|--------------|---|-------------------|
| १. कवीर      | } | परशुराम चतुर्वेदी |
| २. दादू      |   | कृत 'संत काव्य'   |
| ३. सुन्दरदास |   | में से            |

चतुर्थ प्रश्न पत्र—रीति काव्य :—

१. अन्योक्ति कल्पद्रुम-बाबा दीनदयाल गिरि
२. रसखान-आचार्य विश्वनाथ प्रसाद मिश्र द्वारा संपादित ।

५. (ई) (iii)—(हिन्दी आनर्स) भाग २-परीक्षा, 1974

इस परीक्षा में १००-१०० अंक के चार प्रश्न-पत्र होंगे । प्रत्येक के लिए निर्धारित समय तीन घंटे का होगा ।

पाठ्य सामग्री—

प्रथम प्रश्न-पत्र—गद्य (उपन्यास एवं कहानी)

(क) उपन्यास—

अमृतलाल नागर—अमृत और विष

(ख) कहानी-संग्रह—

( i ) डा० हरवंश लाल जर्मा—

गल्प बिहार ।

( ii ) डा० इन्द्रनाथ मदान—कहानी और कहानी ।

द्वितीय प्रश्न-पत्र—गद्य (नाटक, एकांकी एवं निबंध)

(क) नाटक—

जयशंकर प्रसाद—चन्द्रगुप्त

(ख) एकांकी—

अज्ञेय—नये एकांकी

(ग) निबंध—

डा० लक्ष्मीसागर वाष्णो—निबंध नवनीत

तृतीय प्रश्न-पत्र—भाषा-विज्ञान एवं हिन्दी साहित्य का इतिहास

(क) भाषा-विज्ञान—

( i ) स्वर एवं व्यंजन ध्वनियों का वर्गीकरण ।

( ii ) उपसर्ग

( iii ) विभक्ति एवं परसर्ग

( iv ) प्रतिपादिक

( v ) तद्धित एवं कृत प्रत्यय

( vi ) वर्ण, अक्षर, शब्द एवं पद

(ख) हिन्दी साहित्य का इतिहास ।

रामचन्द्र शुक्ल—हिन्दी साहित्य का इतिहास ।

(प्रत्येक काल के अन्तर्गत आने वाला सामान्य परिचय मात्र । )

चतुर्थ प्रश्न-पत्र—निबंध—

किसी एक साहित्यिक विषय पर ।

5 (ड) एम० ए० हिन्दी) परीक्षा,  
(प्रीवियस तथा फाइनल, १९७३)

गद्य-साहित्य

प्रथम प्रश्न-पत्र—

(क) पाठ्य ग्रन्थ—

(१) हिन्दी आलोचना के आधार स्तंभ,  
संपा०-डॉ० रामेश्वरलाल खन्डेलवाल तथा  
सुरेशचन्द्र गुप्ता (प्रकाशक) राधाकृष्ण  
प्रकाशन, दिल्ली)

नोट :—इसमें से ये निबंध छोड़ दिये गये हैं :—

(१) रसात्मक बोध ।

(२) प्रसाद और निराला,

(३) करण-विगम और रसाद-वाद की  
प्रक्रिया ।

(३) साधारणीकरण

(२) जयशंकर 'प्रसाद' : स्कंद गुप्त (प्रका०  
भारती भंडार, इलाहाबाद)

(३) इलाचन्द्र जोशी-जहाज का पंछी-संक्षिप्त ।

(४) डा० हजारी प्रसाद द्विवेदी-वाण मट्ट की  
आत्मकथा ।

(प्रकाशक-हिन्दी ग्रन्थ रत्नाकर बम्बई)

५. डॉ० एम० मलिक एवं डा० रामकुमार गुप्त

नोट :—कथा आयाम ( इन्डिया बुक हाउस, चौड़ा रास्ता, जयपुर ) मूल्य

५॥) के स्थान पर ४) रु० होना चाहिए ।

(ख) सहायक ग्रन्थ :—

( i ) डा० जगन्नाथ प्रसाद शर्मा-प्रसाद के नाटकों  
का शास्त्रीय अध्ययन (प्रकाशक सरस्वती मन्दिर,  
वाराणसी )

- (ii) रघुवंश—नाट्यकला (प्रकाशक—नेशनल पब्लिशिंग हाउस, दिल्ली)
- (iii) सोमनाथ गुप्त—हिन्दी नाटक साहित्य का विकास (हिन्दी भवन, जालंधर)
- (iv) शिवनारायण श्रीवास्तव—हिन्दी उपन्यास : नवीन संकरण (सरस्वती मन्दिर, वाराणसी)
- (v) लक्ष्मीनारायण लाल—कहानियों की शिल्प-विधि का विकास (साहित्य भवन लिमिटेड, इलाहाबाद)
- (vi) डा० जगदीशचन्द्र जोशी—प्रसाद के ऐतिहासिक नाटक (द्वितीय संकरण, आत्माराम एन्ड सन्स, दिल्ली)

द्वितीय प्रश्न-पत्र—आधुनिक काव्य

(क) पाठ्य ग्रन्थ

- (अ) मैथिलीशरण गुप्त—साकेत (साहित्य सदन चिरगाँव, भाँसी । सर्ग ८, ९, तथा १०)
- (ब) जयशंकर 'प्रसाद'—कामधनी (भारती भण्डार इलाहाबाद) (चिन्ता, श्रद्धा, लज्जा और इड़ासर्ग)
- (स) सूर्यकान्त त्रिपाठी निराला (भारतीय भण्डार इलाहाबाद)—तुलसीदास
- (द) रामधारीसिंह 'दिनकर'—कुरुक्षेत्र (१, १ तथा ६ सर्ग)
- (ध) अज्ञेय—आंगन के पारदार, (भारतीय ज्ञान पीठ, काजी)

सहायक पुस्तकें :—

१. दिनकर शुद्ध कविता की खोज—(उदयाचल प्रकाशन)
२. नामवरसिंह—कविता के नये प्रतिमान ।

३. रामचन्द्र शुक्ल—गोस्वामी तुलसीदास (ना.प्र.स.वाराणसी)
४. राजपति दीक्षित—तुलसीदास और उनका युग  
(ज्ञानमण्डल, वाराणसी)
५. सरनामसिंह शर्मा—भक्ति दर्शन (कृष्णा ब्रदर्स, अजमेर)
६. जयकिशनदास खन्डेलवाल—महाकवि सूरदास रवीन्द्र  
प्रकाशन, आगरा

चतुर्थ प्रश्न पत्र —प्राचीन काव्य

(क) पाठ्य ग्रन्थ—

१. चन्दबरसाई : पृथ्वीराज रासो—पद्मावती समय
२. कवीर : कवीर ग्रंथावली—साखी-भाग सं. श्यामसुन्दरदास
३. जायसी : जायसी ग्रंथावली (रामचन्द्र शुक्ल द्वारा  
संपादित) (नागमती वियोग खन्ड तक)
४. विद्यापति—विद्यापति पदावली, प्रकाशक—रवीन्द्र प्रका-  
शन, ग्वालियर ।

(ख) सहायक पुस्तकें —

१. विपिन विहारी त्रिवेदी : चन्दबरसाई और उनका काव्य  
(हिन्दुस्तानी एकेडेमी, इलाहाबाद)
२. हजारी प्रसाद द्विवेदी : कवीर (हिन्दी ग्रन्थ रत्नाकर,  
बम्बई)
३. परशुराम चतुर्वेदी : कवीर साहित्य का अध्ययन (भारती  
भण्डार, इलाहाबाद)
४. पीताम्बर दत्त बडथवाल : हिन्दी साहित्य के निर्गुण  
संप्रदाय (श्रवण पब्लिशिंग) हाउस, लग्नरऊ
५. श्याम मनोहर पांडेय : मध्ययुगीय प्रेमसाध्या (मित्र  
प्रकाशन, इलाहाबाद)
६. डा० विजयेन्द्र स्नातक—कवीर (राधाकृष्ण प्रकाशन  
दिल्ली)

पंचम प्रश्न-पत्र :—आलोचना के सिद्धान्त और हिन्दी साहित्य का इतिहास—

३. उमाकान्त-मैथलीशरण गुप्त (नेशनल पब्लिशिंग हाउस, दिल्ली)
४. डा. के. एल. सहल, साकेत के नवम सर्ग का काव्य-वैभव (साहित्य सदन, चिर गांव, झांसी)
५. रामलालसिंह—कामायनी : एन अनुशीलन (इंडिया प्रेस, इलाहाबाद)
६. डाँ. द्वारिका प्रसाद सक्सेना—कामायनी में काव्य, संस्कृति और दर्शन (विनोद पुस्तक मन्दिर, आगरा)
७. वच्चनसिंह—क्रान्तिकारी कवि 'निराला' (युगाश्रम, विश्वेश्वर गंज, वाराणसी)
८. सावित्री सिन्हा—युग चारण 'दिनकर'
९. नयी कविता : नये घरातल—डा. हरिचरण जर्म (पदम प्रकाशन, जयपुर)

### तृतीय प्रश्न-पत्र—मध्यकालीन काव्य

#### (क) पाठ्य ग्रन्थ—

१. सूरदास : भ्रमरगीत—संपादक—रामचन्द्र शुल्क
२. तुलसीदास : रामचरितमानस—उत्तरकांड
३. मीराबाई : मीरा पदावली—संपादक:शंभुसिंह 'मनोहर' (प्रथम १०० पद)

प्रकाशक—पदम बुक कम्पनी, त्रिपोलिया बाजार, जयपुर ।

४. विहारी : विहारी रत्नाकर । (प्रथम ३०० दोहे)
५. घनानन्द-घनानन्द चयनिका : चयनकर्ता-कृष्णचन्द्र वर्मा (प्रकाशक—रवीन्द्र प्रकाशन, ग्वालियर, आगरा)

#### (ख) सहायक ग्रन्थ—

१. मनमोहन गौतम—सूर की काव्यकला (भारती साहित्य-मन्दिर, दिल्ली)
२. दीनदयाल गुप्त—अष्ट द्वाप और वल्लभ संप्रदाय (हिन्दी साहित्य सम्मेलन, इलाहाबाद)

## (१) आलोचना के सिद्धांत

### (क) भारतीय आलोचना के सिद्धान्त

१. अलंकार सिद्धांत
२. रीति सिद्धांत
३. ध्वनि-सिद्धांत
४. वक्रोक्ति-सिद्धांत
५. औचित्य-सिद्धांत
६. रस-सिद्धांत
७. गद्य पद्य की विविध विधाओं से सम्बन्धित सिद्धांत

आधार ग्रन्थ :—

१. भागीरथ मिश्र : काव्य शास्त्र (विश्वविद्यालय प्रकाशन, गोरखपुर)
२. श्याम सुन्दरदास-साहित्यालोचन
३. बलदेव उपाध्याय-भारतीय साहित्य शास्त्र-भाग I

### (ख) पश्चिमी आलोचना के सिद्धान्त

१. अरस्तू (अ) अनुकृति-सिद्धान्त  
(आ) ट्रैजेडी पर अरस्तू के विचार
२. लोंजाइनस—उदात्त तत्व
३. कॉलरिज—कल्पना सिद्धांत
४. क्रोचे—अभिव्यञ्जनावाद
५. टी. एस. इलियट—काव्य सम्बन्धी मत

आधार ग्रन्थ :—

१. रामअवध द्विवेदी—साहित्य सिद्धान्त (विहार राष्ट्र भाषा परिषद् (पटना)
२. सावित्री सिन्हा—पाश्चात्य काव्य शास्त्र की परम्परा (अनुसंधान—परिषद्, दिल्ली विश्वविद्यालय, दिल्ली)



3. डा० कृष्णवल—भारतीय काव्य शास्त्र राधाकृष्ण  
प्रकाशन, दिल्ली । मूल्य ७) २०

(२) हिन्दी साहित्य का इतिहास

१. रामचन्द्र शुक्ल—हिन्दी साहित्य का इतिहास

२. डॉ० रामकुमार वर्मा—हिन्दी साहित्य का आलो-  
चनात्मक इतिहास

३. डॉ० हजारि प्रसाद द्विवेदी—हिन्दी साहित्य का  
आदिकाल

४. डॉ० लक्ष्मीसागर वाण्य—आधुनिक हिन्दी  
साहित्य

५. डॉ० श्री कृष्णलाल—आधुनिक हिन्दी साहित्य का  
विकास

(१) आलोचना के सिद्धान्त के लिए ६० अंक होंगे, जो तीन प्रश्नों  
में समान रूप से विभक्त होंगे । (क) और (ख) खंडों में से  
प्रत्येक पर से कम से कम एक प्रश्न अनिवार्य होगा ।

(२) हिन्दी साहित्य के इतिहास से सम्बन्धित २०—२० अंकों के दो  
प्रश्न होंगे । यह अंश ४० अंक का होगा ।

षष्ठ प्रश्न-पत्र:—भाषा विज्ञान के सिद्धान्त और हिन्दी भाषा तथा देवनागरी  
लिपि का इतिहास

(क) भाषा विज्ञान के सिद्धान्त—६० अंक

(ख) हिन्दी भाषा और देव नागरी लिपि का इतिहास—४० अंक

(क) भाषा विज्ञान के सिद्धान्त

१. भाषा तथा भाषा विज्ञान की परिभाषा, उनकी प्रकृति अन्य  
ज्ञान-शाखाओं से भाषा विज्ञान का सम्बन्ध, भाषा-विज्ञान  
के अध्ययन के विभाग, भाषा की उत्पत्ति, भाषा की  
विशेषताएँ, भाषा के विकास के कारण, भाषा के विविध  
रूप:—१. मूल भाषा, भाषा परिवार २. बोली भाषा  
और बोली, ३. आदर्श भाषा (i) मौखिक (ii) लिखित,  
४. राष्ट्र भाषा, ५. विशिष्ट भाषा, ६. कृत्रिम भाषा  
(i) गुप्त भाषा, (ii) सामान्य भाषा-भाषाओं के वर्ग-

करण के आधार. विश्व भाषाओं का वर्गीकरण ।  
(सामान्य परिचय)

२. ध्वनि विज्ञान:—परिभाषा और उसका वैज्ञानिक आधार एवं विश्लेषण, ध्वनियों का वर्गीकरण, ध्वनियों के भेद, बलाघात, सुर, ध्वनि परिवर्तन के कारण, ध्वनि परिवर्तन के प्रकार, ध्वनि नियम तथा ग्रिम, ग्रासमान, व्हर्नर, तालव्य भाव का नियम ।

३. रूप विज्ञान:—शब्द और पद का भेद, सम्बन्ध तत्व के विविध प्रकार, सम्बन्ध तत्व एवं अर्थ तत्व का सम्बन्ध, सम्बन्ध तत्व के कार्य, रूप परिवर्तन के कारण एवं दिशाएं ।

४. वाक्य विज्ञान:—वाक्य की परिभाषा, वाक्य का विभाजन, वाक्य प्रकार, एवं वाक्य-परिवर्तन के कारण ।

५. अर्थ विज्ञान:—अर्थ विज्ञान का क्षेत्र, अर्थ-परिवर्तन की दिशाएं ( प्रकार ), अर्थ परिवर्तन के कारण, बौद्धिक नियम, शब्द शक्तियाँ ।

६. लिपि-लिपि और भाषा:—विश्व की विविध लिपियाँ ।

(७) १. हिन्दी भाषा तथा देवनागरी लिपि का इतिहास:—

१. प्राचीन भारतीय आर्य भाषाएं—वैदिक, संस्कृत, पालि प्राकृत, अपभ्रंश तथा अन्य भारतीय आर्य भाषाएं, आधुनिक भारतीय आर्य भाषाएं. उनका वर्गीकरण एवं तत्संबंधी विविध मत ।

२. हिन्दी की बोलियाँ एवं उपभाषाएं : भाषा वैज्ञानिक परिचय ।

३. 'हिन्दी' शब्द एवं भाषा के विकास का इतिहास ।

४. हिन्दी-शब्द-समूह, हिन्दी-उपसर्ग एवं प्रत्यय, ध्वनियाँ, संज्ञा, सर्वनाम, विशेषण, कारक-रूप एवं परसर्ग । लिंग, वचन, क्रिया आदि का विकास ।

२, नागरी लिपि का स्वरूप, विकास की भूमिका, नागरी लिपि-

संशोधन विभिन्न मत, सरकार द्वारा स्वीकृत मत, अन्य आर्थ लिपियाँ ।

नोटः—सहायक पुस्तकें यथापूर्व रहेंगी ।

सप्तम प्रश्न-पत्र—

(क) आधुनिक भारतीय भाषाएं—(कोई एक भाषा) ।

१. उर्दू २. मराठी ३. बंगाली, ४. गुजराती  
अथवा

(ख) आधारभूत भाषाएं—(कोई एक भाषा) ।

१. संस्कृत, २. पालि, ४. अपभ्रंश, ४. राजस्थानी  
(डिंगल)

अथवा

(ग) विशिष्ट कविः—(कोई एक कवि)

(१) तुलसीदास, (२) सूरदास, (३) केशवदास, (४) नारसिंह  
हरिश्चन्द्र, (५) जयशंकर 'प्रसाद'

अथवा

(घ) विशिष्ट विषयः—(कोई एक विषय)

१. काव्य शास्त्र, २. हिन्दी नाटक का उद्भव और विकास,  
३. नया काव्य ४. लोक-साहित्य ।

(क) १. उर्दूः—

पाठ्य ग्रन्थ—

१. मजामीने चकवस्त-चक वस्त

२. मुसद्दने हाली-हाली

३. मुकद्दमा जेरोजायरी-हाली

४. तारीखे अदब उर्दू—रामबादू मक्मेना  
( अनुवादक-मिर्जा मुहम्मद अस्करी ) अध्याय

१, २, ३, ४, ५, ६, ७, ८, ९, १०, ११, १२, १३, १४, १५, १६, १७, १८, १९, २०, २१, २२, २३, २४, २५, २६, २७, २८, २९, ३०, ३१, ३२, ३३, ३४, ३५, ३६, ३७, ३८, ३९, ४०, ४१, ४२, ४३, ४४, ४५, ४६, ४७, ४८, ४९, ५०, ५१, ५२, ५३, ५४, ५५, ५६, ५७, ५८, ५९, ६०, ६१, ६२, ६३, ६४, ६५, ६६, ६७, ६८, ६९, ७०, ७१, ७२, ७३, ७४, ७५, ७६, ७७, ७८, ७९, ८०, ८१, ८२, ८३, ८४, ८५, ८६, ८७, ८८, ८९, ९०, ९१, ९२, ९३, ९४, ९५, ९६, ९७, ९८, ९९, १००

उर्दू साहित्य का इतिहास एजाज हुसैन (अनुमन तख्कीए उर्दू,  
अलीगढ़)

(क) २. मराठीः—

१. जकुन्तला-किलोस्कर)
२. उपाकाल-हरिनारायण ग्रान्टे ।
३. अभिनव काव्य माला, भाग ४-केलकर
४. निबन्धमाला, भाग-१—जी. जी. आगस्कर ।

(क) ३. बंगला:—

१. संचयिता-रवीन्द्रनाथ ठाकुर ।
२. आनन्द मठ-बंकिमचन्द्र चटर्जी ।
३. भान्त महिला—हरप्रसाद शास्त्री ।
४. चन्द्रगुप्त—द्विजेन्द्रलाल राय ।

(क) ४. गुजराती:—

१. गुजरात नो नाथ-कन्हैयालाल माणिक्यलाल मुंजी ।
२. ओतराती दिवालो-काका कालकर ।
३. पदय पारिजात-मूँजालाल ।

(ख) १. संस्कृत:—

१. रघुवंश-(पंचम सर्ग)-कालिदास
२. अभिज्ञान शाकुन्तलम्-(चतुर्थ अंक)-कालिदास ।
३. चन्द्रापीड कथा-बी, अनन्ताचार्य ।

व्याकरण—

१. संस्कृत व्याकरण प्रवेजिका-बाबूराम सक्सेना

(ख) २. पालि:—

१. वम्मपद-(प्रथम दश वर्ग)
२. पाली जातकावली-बुद्धकनायकमो

व्याकरण—

१. पालि प्रबोध-प्राद्यादत्त ठाकुर (गंगापुस्तक माला, लखनऊ)

२. ए मैनुअल आफ पालि—सी. बी. जोशी ।

(ओरियंटल बुक एजेंसी, पूना)

(ख) ३. अपभ्रंशः—

१. अपभ्रंश पाठमाला-नरोत्तम दास स्वामी

(इंडियन प्रेस, इलाहाबाद)

सहायक पुस्तकेंः—

१. अपभ्रंश प्रकाश-देवेन्द्रकुमार

२. अपभ्रंश व्याकरण-हेमचन्द्र

३. अपभ्रंश साहित्य-हरिवंश कोट्टड़ (भारतीय

साहित्य मन्दिर, दिल्ली)

(ग) ४. राजस्थानी (डिगल):—

१. पृथ्वीराज राठौड़

अ-पद्य—

किशन हकनगी ने बेली (वसंत ऋतु के वर्णन से पहले) संपादक-नरोत्तमदास स्वामी, श्रीराम मेहरा एण्ड कम्पनी. आगरा मूल्य १०) के स्थान पर ८ ६०

२. वीर सतसई-सूर्यमल्ल मिश्रण संपादक स्वामी.

नानावत एवं कमल, इंडिया बुक हाउस जयपुर, मूल्य ६।।), ८) ६ के स्थान पर ।

आ-गद्य—

३. बचनिका राठौड़ रत्नसिंह जी की महिम

दासीतरी खिड़िया जगा की कही—संपादक श्री काशीराम जना तथा डा० रघुवीरसिंह।

४. (क) राजस्थानी वार्ता, भाग-२—संपादक,

भवानीशंकर रामाध्याय, ( पृ० १२० तक, अनुवाद नहीं ) ( प्रकाशक-साहित्य संस्थान, राजस्थान विद्यार्षीठ, उदयपुर)

अथवा

(ख) ऐतिहासिक वार्ता (जोधपुर से प्रकाशित परंपरा का अंक)

**सहायक ग्रन्थ—**

१. राजधानी, वेली साहित्य—नरेन्द्र भानावत
२. राजस्थानी भाषा और साहित्य—डा० हीरालाल मैनारिया ।
३. राजस्थानी भाषा और साहित्य—डा० मोतीलाल माहेश्वरी।

**(ग) विशिष्ट कवि—**

**( i ) तुलसीदासः—**

**सहायक ग्रंथ**

१. गोस्वामी तुलसीदास-रामचन्द्र शुक्ल  
(ना. प्र. स., काशी)
२. तुलसीदास और उनका युग-राजपति दीक्षित,  
(ज्ञानमण्डल, वाराणसी)
३. तुलसीदास-माता प्रसाद गुप्त (हिन्दी परिषद्  
इलाहाबाद)
४. तुलसीदास-रामबहोरी शुक्ल (हिंदी भवन,  
जालंधर)
५. तुलसीदर्शन-वलदेवप्रसाद मिश्र (हिन्दी साहित्य  
सम्मेलन, प्रयाग)
६. तुलसीदास-चन्द्रवली पांडेय (ना. प्र. स. काशी)
७. रामचरितमानस का काव्यशास्त्रीय अनुशीलन-  
राजकुमार पांडेय, (अनुसंधान प्रकाशन, कानपुर)
८. तुलसी काव्य मीमांसा-उदयभानसिंह (राधा-  
कृष्ण प्रकाशन, दिल्ली)
९. तुलसी-सं. उदयभानसिंह (राधाकृष्ण प्रकाशन,  
दिल्ली मूल्य ७)

**(ग) ( ii ) सूरदास :—**

**सहायक ग्रंथ**

१. सूरदास-रामचन्द्र शुक्ल सरस्वती मन्दिर,  
वाराणसी)

२. सूरनिर्णय-प्रभुदयाल मिश्र (साहित्य संस्थान, मथुरा)
३. सूरसौरभ-मुंशीराम शर्मा
४. सूरदास की काव्य-कला—मनमोहन गौतम  
(भारती साहित्य मन्दिर, दिल्ली)
५. सूर और उनका साहित्य—हरवंशलाल शर्मा  
(भारत प्रकाशन मंदिर, अलीगढ़)
६. सूरदास-ब्रजेश्वर वर्मा (हिन्दी परिषद्,  
इलाहाबाद)
७. सूरसाहित्य की भूमिका—रामरतन भटनागर
८. सूरदास-सं. हरवंशलाल शर्मा (राधाकृष्ण  
प्रकाशन, दिल्ली) मूल्य ७) २०

### सहायक ग्रंथ

#### (ग) ( iii ) केशवदास :—

१. केशवदास-चन्द्रवली पाण्डे
२. केशव की काव्यकला-कृष्णशंकर शुक्ल
३. केशवदास-होरालाल दीक्षित
४. केशव-एक अध्ययन - सरनामसिन्हा शर्मा

#### (ग) ( iv ) भारतेन्दु हरिश्चन्द्र :—

१. भारतेन्दु -हरिश्चन्द्र ब्रजरतनदास (हिन्दुस्थानी  
एकेडेमी, इलाहाबाद),
२. भारतेन्दु कला-प्रो.म नारायण शुक्ल
३. भारतेन्दु की विचारधारा-लक्ष्मीसागर वाष्णीय
४. भारतेन्दु युग-रामविलास शर्मा विनोद  
पुस्तक मंदिर, आगरा)
५. भारतेन्दु की माया और जैली-गोपाललाल  
खन्ना)

#### (ग) ( v ) जयशंकर 'प्रसाद' :—

१. जयशंकर 'प्रसाद'-नन्ददुलारे वाजपेयी  
(भारती भवन, इलाहाबाद)

२. कामयानी में काव्य, संस्कृति और दर्शन—  
द्वारिका प्रसाद सक्सेना (विनोद पुस्तक मन्दिर,  
आगरा)
३. प्रसाद की काव्य-सावना—रामनाथ 'सुमन'  
(सावना-सदन, इलाहाबाद)
४. प्रसाद के नाटकों का शास्त्रीय अध्ययन—जमनाथ  
प्रसाद शर्मा (सरस्वती मंदिर, वाराणसी)

(घ) विशिष्ट विषय—

(घ) (i) काव्यशास्त्र :

१. काव्यशास्त्र—भागीरथ मिश्र  
(तृतीय संस्करण)
२. भारतीय साहित्यशास्त्र प्रथम खंड—आचार्य  
बलदेव उपाध्याय (प्रकाशक नन्दकिशोर एन्ड  
संस, चौक, वाराणसी)
३. भारतीय काव्य शास्त्र सं. डा० कृष्णवल राधा-  
कृष्ण प्रकाशन, दिल्ली) मूल्य—७) रु६

नोट:—अन्य पुस्तकों के लिए देखिये प्रश्न पत्र V के अन्तर्गत उल्लिखित

(घ) (ii) हिन्दी नाटक का उद्भव और विकास:—

इस प्रश्न पत्र में तीन खंड होंगे। प्रत्येक में से एक-एक प्रश्न अनिवार्य होगा। जेय दो प्रश्न किसी या किन्हीं खंडों से चुने जा सकते हैं—

खंड-(अ)—नाट्यालोचन के सिद्धान्त : भारतीय एवं अ भारतीय

खंड-(आ)—नाटक साहित्य का इतिहास

(१) लोकवर्मी साहित्य

(२) नाट्यवर्मी साहित्य

खंड-(इ)—पाठ्यग्रंथ (व्याख्या सहित)

पाठ्य ग्रंथ—

१. हरिश्चन्द्र नाटक—भारतेन्दु हरिश्चन्द्र
२. त्रुवस्वामिनी—जयशंकर प्रसाद



३. कृष्णार्जुन युद्ध—माखनलाल चतुर्वेदी

४. आपाढ़ का एक दिन—मोहन राकेश

सहायक पुस्तकें :—

१. भरतनाट्यशास्त्र—चौखंभा सीरीज बनारस, अथवा कोई भी हिन्दी अनुवाद

२. दशरूपक—धनंजय (चौखंभा सीरीज, बनारस या हिन्दी अनुवाद)

३. नाट्यदर्पण—रामचन्द्र गुणचन्द्र (प्राप्ति स्थान—नेशनल पब्लिशिंग हाउस, दिल्ली)

४. Study of Drama—Brander Mathews

(नाटक का अध्ययन)—अनु० श्रीमती अवस्थी (आत्माराम एन्ड सन्स, दिल्ली)

५. Theory of Drama—Allardyce Nichol

६. हिन्दी नाटक—सिद्धांत और विवेचना डा० गिरीज रस्तोगी  
(ग्रन्थम, रामबाग कानपुर)

नाट्य साहित्य का इतिहास:—

- |                               |                 |
|-------------------------------|-----------------|
| १. हिन्दी नाटक—उद्भव और विकास | } —डा० दशरथ ओझा |
| २. कोई भी प्रामाणिक           |                 |

(घ) (iii) हिन्दी उपन्यास का उद्भव और विकास:—

इस प्रश्न-पत्र में तीन खंड होंगे। प्रथम दो खंडों में से प्रत्येक पर एक-एक प्रश्न अनिवार्य होगा। तीसरे खंड पर कम से कम दो प्रश्न होंगे। कुल पांच प्रश्न होंगे।

खंड-(अ) औपन्यासिक आलोचना सिद्धांत।

खंड-(आ)—उपन्यास साहित्य का इतिहास।

खंड-(इ)—पाठ्यग्रंथ—व्याख्या-सहित।

(क) पाठ्यग्रंथ :—

१. गोदान—प्रेमचन्द

२. त्यागपत्र जैनेन्द्र

३. मृगनयनी—वृन्दावनलाल वर्मा

४. आग और पानी—रघुवीरशरण 'मित्र'
५. अपने अपने अजनबी—अज्ञेय
६. दिव्य—(संक्षिप्त) यशपाल
७. अमृत और विष (संक्षिप्त)—अमृतलाल नागर

(ख) सहायक पुस्तकें—

१. हिन्दी उपन्यास—कु० सुपमा धवन (राजकमल प्रकाशन, दिल्ली)
२. प्रेमचन्द पूर्व हिन्दी उपन्यास—डा० कैलाश वाजपेयी (हिन्दी साहित्य संसार, दिल्ली)
३. हिन्दी उपन्यास-शिल्प : बदलते परिप्रेक्ष्य—डा० प्रेम भटनागर (अर्चना प्रकाशन, जयपुर)
४. हिन्दी उपन्यास की शिल्प विधि का विकास—डा० ओम कुमारी शुल्क (अनुसंधान प्रकाशन, कानपुर)

(घ) (iv) नया काव्य

(क) पाठ्यग्रंथ—

१. उर्वशी—दिनकर
२. कनुप्रिया—भारती (भारतीय ज्ञानपीठ, काशी) (तृतीय आवृत्ति)
३. आत्मजयी—कुंवरनारायण, (भारतीय ज्ञानपीठ, काशी)
४. नयासत्तक—डा० राकेशगुप्त—लोक भारती प्रकाशन, इलाहाबाद

(ख) सहायक पुस्तकें—

१. मुद्र कविता की खोज—दिनकर
२. नया हिन्दी काव्य—डा० शिवकुमार मिश्र, (अनुसंधान प्रकाशन, कानपुर)
३. नया हिंदी काव्य और विवेचना—डा० सुरेशचंद्र गुप्त (हिन्दी साहित्य संसार, नई सड़क, दिल्ली) ।

नोट :—इस प्रश्न पत्र के तीन खंड होंगे—

(अ) काव्य सिद्धांत : आधुनिक काव्य की परिभाषा, स्वरूप शैली-भेद काव्य-तत्व :

१. अन्तः तत्व—रसादि

२. बाह्य-तत्व—कलापक्ष

काव्य के सम्बन्ध में प्राचीन और नवीन मत, दोनों की आलोचनाएं

(आ) नये काव्य का इतिहास

(इ) पाठ्य ग्रंथ

अंक विभाजन—

इस प्रश्न पत्र में अन्य प्रश्नपत्रों की भांति १०० अंकों के पांच प्रश्न होंगे । ६० अंक पाठ्यग्रन्थों (खण्ड—इ) से सम्बन्धित होंगे तथा शेष दो खण्डों में से प्रत्येक पर बीस-बीस अंक का एक-एक प्रश्न होगा ।

(घ) (v) लोकसाहित्य

(इस विषय पर कोई भी प्रामाणिक पुस्तक)

अष्टम प्रश्न पत्र—निबंध अथवा लघु (शोध) प्रबन्ध

(क) किसी साहित्यक विषय पर उच्च कोटि का निबन्ध

अथवा

(ख) क्षेत्रीय अनुसंधान से सम्बन्धित कोई लघु (शोध) प्रबन्ध ।

Post M.A. Dipeoma Course in Textual Criticism., 1972

No Change

Post M.A. Diploma in Folkloristics Course

No Change

Post M.A. Diploma in Linguistics.

No Change

**Regulation:—Higher Proficiency Certificate Course in Hindi**  
**Classification :—**

60% and above marks—passed with credit

30% and above, but below 60%—passed.

यह प्रश्न-पत्र १०० अंक का होगा । इसके लिये ३ घण्टे का समय निर्धारित होगा । अंक विभाजन इस प्रकार होगा :—

क. भाषा-ज्ञान—२० अंक

ख. रचना—१५ अंक

ग. प्रालेख (ड्राफ्टिंग)—२० अंक

घ. निबन्ध—३० अंक

ङ. विचार-विन्दुओं का विस्तृतीकरण एवं संक्षिप्तीकरण—१५ अंक

नोट :—(क) रचना के अंतर्गत ये बातें पूछी जा सकती हैं—

१. पर्याप्त एवं समोच्चरित शब्दों का अन्तर

२. रचना और वर्तनी सम्बन्धी शुद्धीकरण

(ख) निम्न सामयिक विषयों पर होंगे ।

हिन्दी पाठ्यक्रम समिति का विशेष प्रस्ताव ता. १८-१-७१

यह समिति अनुभव करती है कि एम. ए. हिन्दी के पाठ्यक्रम में युग और परिस्थितियों को देखते हुए परिवर्तन, परिवर्धन एवं विशेषीकरण नितान्त आवश्यक है । अतएव समिति का प्रस्ताव है कि वर्तमान पाठ्य-क्रम में निम्न-लिखित परिवर्तन स्वीकार किया जाये :—

१. प्रश्न पत्रों की संख्या आठ हो, परन्तु निम्न का प्रश्न पत्र कोई पृथक से न हो ।

२. प्रश्न पत्रों का विभाजन इस प्रकार हो—

( i ) प्रथम प्रश्न पत्र—प्राचीन एवं मध्यकालीन काव्य  
(आदिकाल से रीतिकाल के अंत तक)

(ii) द्वितीय प्रश्न पत्र—आधुनिक काव्य  
(भारतेन्दु से आज तक)

(iii) तृतीय प्रश्न पत्र—हिन्दी गद्य (विविध विधाएं : स्वरूप एवं विकास) यथा नाटक, निबंध, उपन्यास, कहानी आदि ।

(iv) चतुर्थ प्रश्न पत्र—हिन्दी साहित्य का इतिहास

(v) पंचम प्रश्न पत्र—किसी विशेष साहित्यकार अथवा साहित्यिक युग का अध्ययन

यथा—सूर, तुलसी, प्रसाद इत्यादि  
अथवा भक्तिकाल, रीतिकाल  
आदि ।

(vi) षष्ठ प्रश्न पत्र—विशेष भाषा

अथवा

भाषा विज्ञान का अध्ययन

यथा

भाषा—

(क) [पाली, प्राकृत]

(ख) अपभ्रंश तथा डिग्ग

- (ग) आधुनिक भाषाएं  
गुजराती, मराठी, बंगला, उर्दू,  
तमिल अथवा मलयालम
- (घ) संस्कृत (केवल उन छात्रों के  
लिए जिन्होंने बी. ए.  
अथवा उसकी समकक्ष  
परीक्षा में संस्कृत  
नहीं ली )

सप्तम प्रश्न पत्र—

- (विशेष साहित्य विभाग)
- (क) यथा कविता, नाटक, उपन्यास  
अथवा कहानी  
अथवा
- (ख) सैद्धान्तिक आलोचना

अष्टम प्रश्न पत्र—

- तकनीकी योग्यता  
(साहित्य संबंधी)

यथा—

- (क) पाठालोचन  
अथवा
- (ख) लोक साहित्य  
अथवा
- (ग) शोध और अनुसंधान  
अथवा
- (घ) अनुवाद एवं अनुवाद कला



## APPENDIX XXIV

(Ref :-Faculty of Arts Res. No. 21 of 10-2-72)

Minutes of the Meeting of the Committee of Courses in Home Science, held on Thursday, October 22, 1970 at 11.30 A.M., at the University Office, Jaipur.

### Present

1. Mrs. B. Tara Bai
2. Mrs. S. Grover
3. Mrs. M. Verma
4. Dr. (Mrs). S. Rastogi (Convener)

1. The Committee offered the following comments on the question papers set for the Examinations of 1970.

- (i) There were serious typographical mistakes in some of the question papers.

First Year T.D.C. :

Sec. A.Q. 1. (b) : Weighing of silk should have been weight of silk. The mistake has been repeated in the Hindi version.

Second Year T.D.C. Paper I ;

Q. 7. (ii) ; Diabetes has been spelt as Diabetese.

Final Year T.D.C. Paper I :

Q.8. (c) : Shock polish was probably meant to be Shoe polish. The mistake is repeated in the Hindi version.

- (ii) Questions were not strictly based on the prescribed courses and were not properly distributed in the First Year T.D.C. Question paper, Sec. A. and Final Year T.D.C. paper I.

These discrepancies were pointed out by the University Maharani's College, Jaipur, in their letters of complaint against the question papers set.

- (iii) Some of the questions were above standard for candidates offering Home Science as one of the three optional subjects.

- (iv) The Hindi version of some questions was not quite correct.

The Committee went through the reports of the Examiners. A few reports were missing—those of Final Year T.D.C. paper I and of some practical Examinations.

The University must insist on reports from the examiners and all reports should be made available to the Committee for consideration.

2. The Committee scrutinized the statements of qualifications and teaching experience of teachers received from the Colleges and revised the panel of examiners for 1971.

3. The committee recommended that the courses of study in Home Science, for all the examinations, as specified in the printed syllabus of 1970 be repeated with some minor changes in the Schemes suggested in Appendix A.

4. The suggestions received from the teachers of the various institutions, in regard to the courses of study were considered and the following recommendations were made :—

(a) Savitri Girls' College, Ajmer :

Final Year, Tailoring & Clothing Construction :

The suggestion that all gent's garments should be deleted from the course was not accepted. Only simple garments like pyjamas, Kurtas and shirts for a boy of 6-12 are included in the syllabus and all these can be stitched at home with advantage. First Year T.D.C. ;

The Committee approves of the suggestion of having two papers for Home science, in the First Year.

The existing scheme has one paper of 100 marks of 3 hours duration. The paper consist of two sections of 50 marks each, for which two separate examiners are appointed.

It would be advantageous to have two separate papers each of 50 marks and of 3 hours duration, in place of the two sections.

The Committee recommended that the proposal be accepted.

III (a) With the limited teaching time for the optional subject, it may not be possible to include extension work in the curriculum although the suggestion is good. It could be included in the B.Sc. Course.

(b) Suggestions by Principal, Banasthali :

Marks for sessional work in Needlework have already been increased to 20, (vide printed syllabus of 1970).

(c) The Committee strongly recommends that separate examiners be appointed for practical examinations in : (i) Cookery and

(ii) Home-management & Laundry work

The existing practice is to appoint one examiner for both practicals, which are conducted in two sessions—4 hrs. for cookery and

2 hrs. for Home-management & Laundry work.

(i) It is felt that the some examiner is not competent enough to examine both subjects. The Nutrition person is out of touch with Home-management and vice versa, Each is a specialised subject.

(ii) Supervision is difficult when the two examinations are conducted simultaneously, one batch doing Cookery and another Home-management at the same time.

(iii) It is not fair to treat two different practicals of six hours duration as one examination.

Extra time is also needed for proper assessment of work after the examination, and for compilation of marks.

It is also recommended that the Home Management practical be increased to 3 hours.

5. The Board considered the following suggestions of the Vice-Chancellor made by him in consultation with the Convener of the Examinations Reform Committee :-

A. Regarding award of Sessional marks, these may be awarded on the basis of Articulation, Comprehension



sion and Objective Tests of students as per details given below :-

*Articulation—4 Marks*

Each student may be required to write at least one essay on the subject each term. This may be assessed by 2 independent teachers independently and marks recorded. Marks may be declared publicly and if any student feels aggrieved he may explain why that particular award given.

*Comprehension—3 marks*

A test may be conducted each term to examine whether the students have picked up the appropriate expression, and have understood the subject matter.

*Objective Test—3 marks*

Under this category marking may be done but the marking may not be shown to the candidate. But the solution may be written by the teacher and posted on the notice board, so that the students may know the correct answers. If this rational basis is adopted there is a change of increasing the quantum of internal assessment.

B. As regards syllabus at the Post-graduate level, I suggest that—

- (i) a list of full and half courses may be prepared according to the availability of teaching competence.
- (ii) it may be possible for a student to offer two full courses as a topic to give specialisation in that topic. Such a student would prepare himself for research in this topic.
- (iii) a student who wishes to learn the subject for becoming a teacher, he may offer 4 half courses covering a variety of topics to have an extensive view of the subject. In fact the students may have to choose one full and two half courses.

- C. For very few bright students it may be suggested that they may be encouraged to do some self-study on pre-assigned topics which are not included in their curriculum and they may be assessed entirely on that as far as sessional marks are concerned .

The Committee very much appreciates the suggestion of the Vice-Chancellor regarding award of sessional marks. However, certain clarifications are required for introduction of the system.

- (i) As per details given, 10 marks are to be awarded from the total marks of the theory paper, leaving the theory paper to be of 90 marks in place of 100.
- (ii) Are the marks for internal assessment to be deducted from the total marks of the theory paper, leaving the theory paper to be of 90 marks in place of 100 ?
- (iii) What would be the criteria for the very bright students ? Are they to be exempted from all other tests ?

6. It was reported that Academic Council, vide its Res. No. 35 dated 21.4.70 accepted the following draft resolution prepared by Dr. Daya Krishna, Chairman. Examination reforms Committee vide his letter No. Acd/c/1082 dated 17.4.70 as a result of discussions in the meeting of the Examination reform Committee held on 17th April, 1970 :-

“Resolved that in the interest of raising standards of teaching and examinations and award of degrees the Board of Studies may prepare alternative Schemes of courses and Examinations in their respective subjects to be implemented as early as possible.”

- (i) For the First Year T.D.C. Examination, there should be two papers of 50 marks each, instead of one paper.
- (ii) Cookery and Home-management practical examinations should be conducted separately and a specialist in each subject should be appointed as examiner.
- (iii) Private candidates may not be permitted to offer the subject, as it is not possible for these

candidates to take up practical training in the subject under expert guidance.

Without such practical training, the whole purpose of the course is defeated.

- (iv) Colleges should be encouraged to start B. Sc. Courses in Home Science. It is stressed again by the Committee that the existing courses do not offer any job opportunities or scope for further training in the subject. Moreover, a background of knowledge in basic Science subjects is important to understand subjects like Nutrition, Textiles and Household management. As an optional subject the scope of study is very limited.

**Sd/-Mrs. S.Rastogi**

*Convener*

## APPENDIX A

Recommendations in regard to the scheme of Examinations in Home science.

I For The First Year T.D.C. Examination in Home Science, the following scheme is recommended in place of the existing scheme.

- (i) Page LXV III of the printed syllabus of 1970. There shall be two papers, each of 3 hours duration and carrying 50 marks.

Paper I Household Economics, Textiles & Clothing	Max. marks	Min pass marks
	50	18

Section A—Household Economics	20 marks	
Section B Textiles & Clothing	30 marks	

Paper II Health science (Human Physiology)	50	18
(to be set and examined by a medical person)		

Total 100 marks

- (ii) Page 33–34

The following is to be substituted :

There shall be two papers, each of 3 hours duration and carrying 50 marks.

Paper I Household Economics, Textiles & Clothing	50 marks
Section A Household Economics	20 marks
Section B Textiles & Clothing	30 marks

Paper II Health Science (Human Physiology)	50 marks
--	----------

- (iii) Page 34. 3rd line from top—

The following is to be substituted;

Paper I	50 marks	}
Section A Household Economics	20 marks	

## (iv) Page 37

(a) Section B Textiles and Clothing 30 marks,  
in place of 'Textiles & Clothing'  
The spelling of Textiles is to be  
corrected.

(b) Textiles & Clothing in the next line is to be  
deleted.

## (v) Page 46

Paper II 50 marks, in place of 'Section B'.

## II (i) Page XCI of the printed syllabus of 1970

(a) Under Practical Tests in—

(iii) Home Management and Laundry  
work, the duration of the practical  
test is to be increased to 3 hours in  
place of 2 hours.

(b) Note (b) is to be deleted.

## (ii) Page 154—4th line from top

3 hours to be substituted for two hours.

## APPENDIX XV

( *Ref:-Faculty of Arts Res. No. 21 of 10-2-71.* )

Minutes of the Meeting of the Board of Studies in Geography held on 19-9-1970 at 12 noon, at the University Office, Jaipur.

### Present

1. Dr. Indra Pal (Convener)
2. Dr. A.N. Bhattacharya (external member)
3. Shri M.L. Solanki
4. Dr. M.N. Nigam
5. Dr. R.B. Singh
6. Dr. L.N. Upadhyaya

1. Under Section (34) (4) (iv) of the University Act, the Board elected Shri M. L. Solanki as a member other than the convener of the Board of Studies to serve on the Committee for the selection of examiners in the subject for the year 1971.

2. As reported by the Convener the Examiners reports were received by him on the eve of the meeting and were placed at the table. These were not circulated amongst the members as in previous years. Therefore, it is not possible to give comments and the Board delegated the power to the Convener and Shri M.L. Solanki to go through the reports and submit them with their comments. Their comments shall be treated as passed by the Board.

3. The Board scrutinized the statements of qualifications and teaching experience etc. of teachers (received from University Teaching Departments, University Colleges, affiliated institutions and other Universities) for inclusion in the revised panel of examiners for 1971 and revised the panel accordingly.

4. The Board recommended courses of Study and text books in Geography for the following examinations, after considering the suggestion received from the teachers in the subject (Vide Appendix A).

1. Pre-University Examination, 1972.
2. B.A./B.Sc. Pass First Year T.D.C. Examination, 1972.
3. B.A./B.Sc. Pass Second Year T.D.C. Exam. 1973.
4. B.A./B.Sc. Pass Final Year Examination, 1974.
5. B.A. Honours Exams.
6. M.A. Prev. Exam. of 1972 and Final 1973 respecting

5. The Board considered the following suggestions of the Vice-Chancellor made by him in consultation with the Convener of the Examinations Reforms Committee :—

- A. Regarding award of Sessional marks, these may be awarded on the basis of Articulation, Comprehension and Objective Tests of the students as per details given below :

*Articulation—4 marks*

Each student may be required to write atleast one essay on the subject each term. This may be assessed by 2 independent teachers independently and marks recorded. Marks may be declared publicly and if any student feels aggrieved he may be explained why that particular award given.

*Comprehension—3 marks*

A test may be conducted each term to examine whether the students have picked up the appropriate expression, and have understood the subject matter.

*Objective Test—3 marks*

Under this category marking may be done but the marks may be not be shown to the candidate. But the solution may be written by the teacher and posted on the notice board so that the students may know the correct answers. If this rational basis is adopted there is a chance of in-

creasing the quantum of internal assessment.

B. As regards syllabus at the Post-graduate level, I suggest that—

- (i) a list of full and half courses may be prepared according to the availability of teaching competence.
- (ii) it may be possible for a student to offer two full courses as a topic to give specialisation in that topic. Such a student would prepare himself for research in this topic.
- (iii) a student who wishes to learn the subject for becoming a teacher, he may offer 4 half courses covering a variety of topics to have an extensive view of the subject. In fact the students may have to choose one full and two half courses.

C. For very few bright students it may be suggested that they may be encouraged to do some self-study on pre-assigned topics which are not included in their curriculum and they may be assessed entirely on that as far as sessional marks are concerned.

Resolved to recommend that—

- (i) The suggestion at A above be deferred.
- (ii) The suggestion at B above be deferred.

6 It was reported that the Academic Council, vide its Resolution No. 35 dated 21.4.70 accepted the following draft resolution proposed by Dr. Dayakrishna, Chairman, Examination Reforms Committee vide his letter No. Acd/c/1682 dated 17.4.70 as a result of discussion in the meeting of the Examination Reforms Committee held on 17th April, 1970 :—

“Resolved that in the interest of raising standards of teaching and examinations and award of degrees the Board of Studies may prepare alternative Schemes of courses and Examinations in their respective subjects to be implemented as early as possible.”



*Resolved to recommend that the proposal be deferred for the present.*

8 The Board considered the letter dated 21st April, 1970 received from Shri R.B. Singh, Member of the Board of Studies in Geography containing his comments on the last meeting held on 11/12th September, 1969 (copy of letter attached (Appendix B.)

Resolved that in resolution No. 1 of the last meeting of the Board of Studies in Geography held on 11/12/13th September, 69, the word 'Ministerpreted' be deleted.

9. The Board read proposal (*vide Appendix C*) received from Dr. M.N. Nigam, L.N. Upadhyaya and Dr. R.B. Singh, Member of the Board of Studies in Geography for prescribing minimum qualifications for Technical and Non-technical staff in a Department of Geography duly forwarded by the Convener of the Board.

Resolved that seven copies of the Report of U.G.C. Review Committee be brought at its next meeting and the proposal of Dr. Upadhyaya, Nigam and R.B. Singh be circulated along with U.G.C. Committee Report and be placed at its next meeting. The relevant information from the various Universities. Aligarh, Benaras, Chandigarh, Delhi, Hyderabad, Madras, Patna, Magadh, Udaipur and Jodhpur be also obtained.

10. Resolved that atleast two periods per week per student be provided for guiding Dissertation work.

11. While recommending the courses the Board considered the lists of publications as printed in the catalogues received from the (i) Senior Research Officer, Commission for Scientific and Technical Terminology (Ministry of Education) New Delhi vide his letter dated 30-7-1970 and also (ii) the National Book Trust India vide his letter No. F. 37-2/69/SC dated the 7th November, 1969 for inclusion of their books in the syllabi of the different Examinations.

12. The Board considered the complaint dated 14-3-70 lodged by the Internal Examiners Shri O.P. Solanki against the external examiner Shri B.L. Sharma, Neem Ra Thana who conducted the practical examination of First Year T.D.C. Arts at Lohia College, Churu and reply dated 10-7-70 of Shri B.L. Sharma along with the letter dated 8th May, 70

received from the Principal, Lohia College, Churu in this regard/Resolved that the University may appoint an enquiry Committee to investigate the entire matter.

13. The Board considered the suggestion of Dr. Indrapal, Head of the University Department of Geography, Jaipur regarding the courses of study for the M.A. Examination as contained in his letter dated 7-9-70 while recommending the courses of study.

*N. B. :* Note of Dissent given by Shri R.B. Singh attached (Appendix B).

Sd/-Indrapal  
*Convener*

## APPENDIX A

(i) Pre-University Examination of 1972—No change.

(ii) B.A. Pass Ist year 1972 :—

The courses in Physical Geography be consolidated in this paper and the following theories be included :—

*5 Theories of Mountain Building.*

1. Geosynclinal Orogenic Theory of Kobar.
2. Thermal Contraction theory of Jaffreys.
3. Radio-activity theory of joly.
4. Theory of sliding continents by Daly.
5. Convection current theory of A. Holms.

*I Year T.D.C. Practical*

In the first line at page No. 26 the Hindi lettering be introduced on the pattern of National styles of India.

Item No. 7 of Second Year T.D.C. at page No. 88 is to be transferred to I year Practical course and it be inserted before item No. 5 at page No. 26 and Serial No. be accordingly corrected.

*Books recommended :*

Page No. 26 :—Delete books No. 1, 2, 7 and 9.

*Second Year T.D.C. Arts, 1973*

Page 85 Delete book No. 9 and it be replaced by "Economic Geography by M.R. Choudhary."

Page No. 86 & 87 :—Delete book No. 3 and 11.

Page No. 89 :—Delete book No. 8.

Page No. 86 :—The note after paper second should be written as follows :—

*Note :—*Questions will be asked on Asia a whole and its major regions. But questions will also be asked on the following countries of South and East Asia, Japan, China, Vietnam, Indonesia, Malasia, Burma, Pakistan, Turkey, Israil and. Iraq.

*Third Year T.D.C. Arts, 1974*

Under paper Ist—In line 1st the word Egypt be replaced by U.A.R.

Page No. 181 :—Under the titles books recommended item No. 2 be deleted.

Page No. 183 :—Delete book No. 7.

Page No. 184 :—Delete book No. 20.

To be added after the books recommended in paper II at page No. 185 :—

1. Studies in Geography.
2. Ajmer Geographer published by Geographical Society, Dayanand College, Ajmer.
3. भूदर्शन—गुरुकुपा, पैलेस रोड, उदयपुर ।
4. Annuals of Arid Zone published by Central Arid Zone Research Institute, Jodhpur.

*Practicals*

In Practical a report on field be submitted and it would carry five marks.

Page No. 186 :—Delete book No. 9.

*B.A. Hons. Examination.*

No Change.

For the M.A. Examination Prev. 1972 and Final 73.

*M.A. Examinations*

**GEOGRAPHY**

There will be four theory papers and a practical of 100 marks each in M.A. Prev. and Final examinations. Each of the theory paper will be of 100 marks (90 theory and 10 sessional) and of three hours duration. Candidates will be required to pass both in theory and practicals separately.  
M. A. Previous Examination :—

Paper I—Evolution of Geographical Thought and Methodology. Syllabus enclosed

Paper II—Geography of Land Forms ( „ „ )

Paper III—Any one of the following :—No change

Either (a) Advanced Regional Geography of U.S.A. and U.S.S.R.

Or

Or (b) Comparative Geography of the three Southern Continents.

Paper IV—Any one of the following :

- (a) Monsoon Asia,
- (b) West Asia.
- (c) Geography of Population and Settlement.

Practicals—Laboratory and Map work 100 marks

Map work paper (3 hours duration)	40	„
Record of Practical work	30	„
Viva-voce	10	„
Field work Report	20	„

*M. A. Final Examination*

Paper I—Geography of India and adjacent countries—  
Ceylon and Himalaya kingdoms and Pakistan,  
No 1115c

Paper II—Geography of Resources. Syllabus attached

Paper III—Any one of the following :

- (a) Applied Geography. (No change)
- (b) Bio-geography, ( „ )
- (c) Agriculture Geography. (Syllabus attached)

Paper IV—Any one of the following : (No change)

- (a) Political Geography.
- (b) Urban Geography.

Disseration on any topic approved by the Head of the Department in lieu of any one paper under III and IV.

Practical—Field Survey and Laboratory work. 100 marks

Substitute in item No. IV of Practicals of pages.,  
215 of Syllabus 1970 Edition.

*M. A. Previous Practical*

*Projections :*

Definition of a Projection.

Representation of Scale.

Representation of areas.

Representation of Shape.

Representation of True bearings and distances.

Conical Equal area with one standard parallel.

Obl'que conic, Mercator, Mollweide.

Truncated Mercator & Mollweide.

Zenithal Stereographic, Airy's Projection.

Zenithal Gnomonic.

Projection of Sphere on Circumscribed cube.

Clarke's Projection, Sir Henery Jaine's Projection.

Bonne's Projection, Sinusoidal Truncated.

Sinusoidal, Warner's Projection, Polyconic.

International, Aitoff's Projection, Gall's Projection.

Globular, Mell's Modified Globular.

Identification and Choice of Projections.

Cassini's Projection.

Gauss' Conformal projections.

To be added.

Block diagrams, Field sketching, Serial Profiles.

Hypsographic Curve. Altimatric Frequency graph.

-Add the following after item No. VI-page 215 M.A. Syllabi, 1970 Editions.

To collect field data of an area where a week camp be held.

### *M.A. Previous*

Paper I-Evolution of Geographical Thought and Methodology.

Part I-Evolution of Geographical Thought.

Purpose and philosophy of Geography. Geography in the vedic period and Geography of Puranas.

Geography in Ancient times. Geographic contribution of Greek, Roman and Arab Geographers; contribution by Al-Masudi, Al-Biruni, Al-Idrisi and Ibn Battuta. Persian, Greek and Indian influences. Renaissance in Geography; Advent of modern period in Geography: Contributions of Humboldt. Titter and Ratzal : German, French, British and

American Schools of thought; Dichotism vs. Unity in Geography; Systematic vis-a-vis regional Geography; Physical; vis-a-vis Human Geography; Recent trends in Geography; Development of Science of Geomorphology. Emergence Geographic thought in modern India.

## Part II—Concepts and Methodology.

Concepts of regions and regionalism; regions of different types and order; Concepts of core and marginal areas; concepts relating to man environment relationships; determinism, neodeterminism and possibilism; concept of city-country functional relationship, Urbanfields and gradients; Different methods of delimiting regions-rural urban; and industrial; method of measuring concentration and dispersal of economic activities.

### Paper II—The Geography of Land Forms.

The Origin of the earth—

Recent theories of the origin of the earth.

The Constitution of the Earth's interior—

The evidence of seismology, the zoning of the earth's interior, the thermal state of the earth's interior.

The Principle of Isostasy—

The origin of the concept, the concept, of compensation, different views.

Earth's Major Relief—

The origin of continents and ocean-basins, the view of Lowthian-Green and Wager.

Earth movement and Geological Structure—

Secular and Sudden, origin of the Force and Geological Structures.

Mountain Building—

The various theories of mountain building, types of mountains.

Sub-aerial denudations—

Weathering and Erosion, Forms of water-eroded, valleys. Profiles, Mathematical form of river curves, river deposition, the fundamental principles of the cycle of erosion and

its presentation, the cycle concept in Geomorphology, the drainage patterns.

Karst, Arid, Glacial, granitic, Coastal. To organise a Study of any topography.

Tour in the study of Erosion Surfaces.

Concept of erosion surface, techniques of recognition and correlation of erosion surfaces with special reference to India.

The study of Slope.

Concept of Slope in Geomorphology, old and new ideas on the evolution of hill-side slope elements (Hilltop, Hill side, Scree slope and pediment). Detailed study of the ideas of Davis, penck, wood, Green, Lawson, L.C. King Culling, Leopold, Horton and Strahler on the development of slope.

The relief of the Ocean bottoms. Coral Islands, Reefs, Attols.

### *M.A. Final*

#### Paper II Geography of Resources

Definition, fundamental concept, principles, scope and evolution of Economic and Resource Geography. Approaches to the study-Regional, functional and formal approach.

Resource Scarcity Hypotheses : Empirical evidence and analysis; Concepts, techniques and problem of conservation of resources with special reference to soils, minerals, forests and water; Role of technological change in resource utilisation; Resource Regions.

Problems of criteria, quantification and regional delimitation.

Classification of resources; Soil resources; Soil types and their world distribution; Biotic resources; Distribution and Utilisation of Forests; Mineral resources; World distribution, production and trade in iron ore, manganese, mica, copper, lead and tin, Power resources; coal, petroleum, hydroelectricity, and atomic fuels; Human resources; distribution and density of population in the modern world.

Cereal crops; Wheat, rice, maize and barley; Sugarcane;



Beverage crops: Tea, Coffee and Cocoa; Fibres: Cotton Jute, and Rubber; Tobacco; Agricultural Regions of the World.

Industries; theories of location of Industries; Iron and Steel Industry; Automobile industry; Merchant Ship-building industries; Heavy Chemicals; Textiles: Cotton, Silk, Wool and artificial fibres; Industrial regions of the World.

### *M.A. Final*

#### **“Agricultural Geography”**

1. Concept of Agriculture.
2. Development of Agriculture through the ages, special reference to India.
3. Factors influencing the Agriculture; Physical, Economic and Social & Political.
4. Soil: Formation, Types, Soil erosion and soil exhaustion, soil conservation, Soil Fertility & Productivity Relationship.
5. Agricultural Land use : Land as Resource, history of land use surveys in important countries, Land use policies and planning von, Thuiers's agri. locan theory major land use classes and allotment of land to different classes; Land classification & Land capability; on the basis of British Pattern, American Pattern, Indian pattern Communist Pattern and the quantified method Unit area basis. Mapping land use data—
6. Types of agriculture and farming practices.
7. Irrigation—Importance; methods advantages and disadvantages, measures to solve the problems of irrigation.
8. Agricultural Regions concept and methods.
9. Crop combination regions—Methods, crop-regions of any area.

10. Agricultural efficiency.

11. Agricultural problems.

*M. A. Previous, 1972*

Paper I—Add following books after recommended books—

1. Freeman T.W.—Hundered years of Geography.
2. R.E. Dickenson—Makers of Geography.
3. Crone —Maps and their makers.
4. Minshull —Regional Geography.
5. Brock —The spirit of Geography.
6. S.P. Chatterji —Progress of Science (50 Yrs. of Geography.)
7. Hagget & Chorla—Models in Geogrphy.
8. B. Dubey —Geographical concepts  
National Geography Society, Varanasi.
9. S.D. Kaushik —भौगोलिक विचारधारा
10. विद्यालंकार —वैदिक सम्पत्ति

Paper III—To be added the following book—

1. T. Shabad —Industrial Resources of  
U.S.S.R.

Paper IV—To be added—

1. रोबिनसन —मानसून एशिया

The following books may please be included—

1. Mineralogy—J. Sinkankas—Von Nostrand Reinhold  
Rs. 15. East-West Press.
2. An Introduction to Physical Do  
Geology—W.T. Miller  
Rs. 10.00
3. India-Regional Studies—21 I.G.C. India 1968

Indian National Committee  
for Geography. Columbia

University Press, New York  
London.

4. Basic Industrial Resources of the U.S.S.R.—  
20 Dollars

Theodore shabed press

5. Land utilisation in East Central Europe—Case  
Studies—Geographia Polonica 5 Instr. of Geog.—  
Polish Academy of Sciences Warszawa, 1965  
Editor J. Kostrowicki 10 Dollars.
6. Makers of Geog.
7. Geog. Its Scope and spirit Jan. O.M. Brock The  
Charles E. Merrill Books INC Columbus OHID  
5.00 Dollars.
8. Market Towns & Spatial Development in India  
NCAER Rs. 18.00.

Copy of letter No. nil dated the 21st July, 1970 from R.B. Singh, Member B.O.S. in Geog. University Department of Geography, University of Rajasthan, Jaipur, to the Registrar, University of Rajasthan, Jaipur.

Sub : Proceedings of the B.O.S. in Geography.

This is to inform you that the report of the Geography Committee Meeting held on 11th to 13th September, 1969 under the Convenership of Dr. Indrapal is mis-represented, vague and at some places cases not correctly worded, with the result that the actual decisions taken could not be reported correctly. For example the following mentions may be made :

- (i) item No. 1 line 2, word mis "represented" was never uttered by any member present, by way of conclusion when Dr.M.N. Nigam and myself demanded clarification of Section 24 E (8) of the University Act, regarding the appointment of a Convener.
- (ii) item No. 2 the word "appointed" should not have been used. In fact under Section 34 (4) (iv) of the University Act. Dr. L.N. Upadhyaya was "elected".
- (iii) item No- 3 is vague.
- (iv) item No. 5 is not also clear, specially for M.A. Final. It may be added that I was never informed about the preparation of Practical Courses in B.A. Hons. No mention has been made about the detailed syllabus submitted by the undersigned for Resource Geography.
- (v) item No. 6 is not clear.
- (vi) item No. 7 does not represent the decision of the Board.
- (vii) item No. 10 has been wrongly referred.
- (viii) Regarding item No. 11 a detailed resolution is submitted to the Convener under the signature of three internal members of B.O.S., but it has been completely ignored.

In addition to the above shortcomings, I regretfully inform that I had already conveyed my opinion and suggestions regarding lacuna of the language used and matters given vide my letters dated 9.10.69 and 28-10-69.

## APPENDIX C

(Ref. Res. No. of the minutes of the B.O.S. in Geography)

Board of Studies in Geography in its meeting held on 13th Sept., 1969 have passed a resolution that 'The affiliating conditions and qualifications of the Staff should be as per U.G.C Review Committee Report pp. 79-80 have only mentioned about the nature of staff required for a Geography Department. Two broad categories have been defined-one of teaching staff. members and the other of Technical and non teaching staff under the latter category a trained Cartographer, two technical Asstt. One Draftsman-cum-artist, one map curator and one library Asstt. and some other ministerial staff are needed. Specifically detailed qualifications are not mentioned. The members of the Board of Studies in Geography University of Rajasthan, Jaipur recommend that the minimum qualifications of the respective posts should be as follows :—

- |                                     |  |
|-------------------------------------|--|
| 1. Trained Cartographer             | Graduate in Geography, Statistics, and Drawing of Degree/Diploma in Cartography.   |
| 2. Technical Asstt. (Survey Asstt.) | Survey Asstt must have Diploma in Surveying with three yeares practical experience |
| 3. Draftsman cum Artist             | Diploma holder in Draftsman ship   |
| 4. Map curator/map librarian        | Graduate in Geography preferably with Diploma in Library Science.                  |
| 5. Library Assistant.               | —do—   |

The above recommendations may kindly be brought in fact with immediate effect. We further wish that the recommendations should be incorporated in the minutes of Board of studies proceedings, so that the departments and authorities may make use of it.

## APPENDIX D

Sub:—Note of Dissent in B.O.S. in Geography.

I am submitting herewith a note of dissent in connection with the proceedings of last B.O.S. meeting in Geography held on 19th September, 1970.

- (i) Camp should be replaced by excursion and excursion reports, because there it is not possible to hold camps in affiliated colleges on the one hand and camps envisage serious wastage of time, money and energy.
- (ii) M.A. Final Practical marks should be prescribed as follows :—
  - 40 marks written tests
  - 20 marks record & viva voce
  - 20 marks field work & viva-voce
  - 20 marks excursion report & viva-voce
- (iii) Examination system of dissertations should be changed as follows :—

Both external and internal examiners should assess each thesis independently and submit the marks directly to the University. An average of the two should be considered as the actual marks obtained by a candidate. In case the range of marks awarded by the external and internal examiner is more than 10 the dissertation concerned should be referred to the third examiner intimating the two assessments. His award should be final. Dissertation marks should be allotted following :—

- (i) 75 marks for theoretical evaluation by the external & internal examiners.
- (ii) 25 marks viva-voce by the external examiner.
- (iv) Viva-voce should be conducted by the Board of examiners consisting of external and internal examiners only. Marks awarded should be sealed on the spot duly signed by the external and internal examiners.
- (v) Dissertations should be equally divided amongst the staff members. No one should be allowed to

supervise more than two dissertations. Students securing more than 58% marks in M.A. Previous should be allowed to offer dissertation.

- (vi) At Post graduate level those teachers who are University examiners in one of the theory papers should not be internal examiners in practicals. This is particularly necessary to make a rational division of marks and responsibilities amongst the staff member which is so far accumulated in the hands of the Head of the Department. At present 400 marks are centred in the hands of the Head.
- (vii) No teacher including the Head of the Deptt. shall be internal examiner in more than one practical examination. Internal examiner must be the one who is teaching maximum number of students (practicals) in that class.
- (viii) Private candidates should not be allowed to offer Geography.
- (ix) External examiner should be strictly from the adjoining States of Rajasthan.

## APPENDIX—XVI

Minutes of the meeting of the Board of Studies in Economics held on 3rd November, 1970 at 11 a. m. at the University office, Jaipur.

### Present

1. Dr. Raj Krishna
2. Principal B. Sinha
3. Principal S. L. Doshi
4. Prof. H. C. Jain
5. Principal S. C. Tela-Convener

1. Under Section 34(4)(iv) of the University Act, the Board elected Principal S. L. Doshi as a member other than the Convener of the Board of Studies to serve on the Committee for the Selection of examiners in the subject for the year 1971, Principal Doshi withdrew his name and proposed the name of Dr. Raj Krishna. Dr. Raj Krishna was unanimously elected to the Committee.

2. The Board offered following comments, after going through the reports of examiners and question papers set for the examination of 1970.

*Resolved to recommend that :—*

(a) In view of the serious nature of complaints received against Question Paper of I.st Year T. D. D. Examination, the paper setter for Ist Year T. D. C. Examination be changed. Instructions be issued to the new Paper-setter.

(b) The Paper setter of paper II (a)—Economic planning in India—be requested to be more careful in the matter of translation.

3. The Board scrutinised the statements of qualifications and teaching experience etc. of teachers (received from University Teaching Departments, University Colleges, affiliated institutions and other Universities) for inclusion in the revised panel of examiners for 1971 and revised this panel accordingly.

The Board resolved that out of the information collected by the University office, the paper wise and subject-wise



teaching experience of every person in the panel of Examiners (both Internal and External) should be tabulated and placed before the Board regularly along with the panel.

The Board felt that as far as possible all Examiners should be appointed in the meeting of the Selection of Examiners Committee.

The Board felt that the structure and content of papers in Ist Year, IInd Year and III<sup>rd</sup> Year T. D. C. Examinations requires a change. Resolved to recommend that the scheme of papers be revised as under :—

1. *B.A. Pass I Yr. Examination*

One paper on Economic Organisation.

2. *B.A. Pass IInd Year Examination*

I Paper—Micro-Economic Theory

II Paper—Elements of Statistics

Or

Problems of Indian Economy

3. *B.A. Pass Third Year Examination*

I Paper—Money, Banking & Public Finance

II Paper—Problems of Indian Economy—

To be offered by those candidates who had done Elements of Statistics in IInd Year.

Or

Comparative Economic Development of U.K., U.S.S.R. and Japan—to be offered by those candidates who had done Problems of Indian Economy in II Year.

5. The Registrar reported that no suggestions regarding syllabus had been received from Teachers for the consideration of the Board. It was resolved to discuss the details of courses of these papers in the next meeting.

6. The Board considered the following suggestions of the Vice-Chancellor made by him in consultation with the Convener of the Examinations Reforms Committee :—

- A. Regarding award of Sessional marks, these may be awarded on the basis of Articulation, Comprehension and Objective Tests of the students as per details given below :—

*Articulation—(4 marks)*

Each student may be required to write atleast one essay on the subject each term. This may be assessed by 2 independent teachers independently and marks recorded. Marks may be declared publicly and if any student feels aggrieved he may be explained why that particular award given.

*Comprehension—(3 marks)*

A test may be conducted each term to examine whether the students have picked up the appropriate expression, and have understood the subject matter.

*Objective test—(3 marks)*

Under this category marking may be done but the marks may not be shown to the candidate. But the solution may be written by the teacher and posted on the notice board, so that the students may know the correct answers. If this rational basis is adopted there is a chance of increasing the quantum of internal assessment.

- B. As regards syllabus at the Post-graduate level, I suggest that—

- (i) a list of full and half courses may be prepared according to the availability of teaching competence.
- (ii) it may be possible for a student to offer two full courses as the topic to give specialisation in that topic. Such a student would prepare himself for research in this topic.
- (iii) a student who wishes to learn the subject for becoming a teacher he may offer 4 half courses covering a variety of topics to have an extensive view of the subject. In fact the students may have to choose one full and two half courses.

- C. For very few bright students it may be suggested that they may be encouraged to do some self-study on pre-assigned topics which are not included in their curriculum and they may be assessed entirely on that as far as sessional marks are concerned.

(a) *regarding sessional marks—*

Resolved to suggest to all P.G. Units that in papers where it is possible half the sessional marks may be awarded on the basis of an objective test paper on the other half on the basis of an Essay. In other papers, Essay type answers may continue to be used as the main basis.

But the Board feels that the P.G. Units should be free to follow their own pattern, if they like.

(b) Rejected as the proposal is ambiguous and impracticable in the present form.

(c) Not agreed.

7. It was reported that the Academic Council, vide its Res. No. 35 dated 21-4-70 accepted the following draft resolution proposed by Dr. Dayakrishna, Chairman Examination Reforms Committee vide his letter No. Acd/c/1082 dated 17-4-70 as a result of discussion in the meeting of the Examination Reforms Committee held on 17th April, 1970 :—

“Resolved that in the interest of raising standards of teaching and examinations and award of degrees the Board of Studies may prepare alternative Schemes of courses and Examinations in their respective subjects to be implemented as early as possible.”

*Resolved to recommend* that since the Alternative Schemes are not before the Board particularly in respect of the Pattern of Examination of each Scheme, the Board cannot take further action in the matter. However, the Board will continue as before to provide more options in the course structure. The Board also accepts in Principle the idea of instituting a Post—M.A. Diploma in Quantitative Economics. The Board will consider a draft syllabus at its next meeting. Dr. Raj Krishana was requested to prepare a draft syllabus.

8. The Board considered complaints received from some of the colleges against question paper of Economics for B.A. Pass I Yr. T.D.C. Examination, 1970.

Resolved to recommend that in view of the serious nature of complaints, the Paper-setter of Ist Year T.D.C. Economics paper be changed.

9. The Board considered a complaint received against Question Paper II (a) of II Yr. T.D.C. Arts Examination, 1970.

Resolved that the Paper setter be asked to be more careful in matters of translation of the English version of the questions into Hindi.

The Board considered—Letter of Bhilwara College and Agreed to get a model paper prepared for III Yr. T.D.C.—Comparative Economic Development of Four countries and circulated to Colleges.

University Department be requested to get the model paper prepared in consultation with the Convener and two teachers teaching the paper in affiliated colleges.

The meeting was adjourned with a vote of thanks to the Chair.

Minutes of the Second Meeting of the Board of Studies in Economics held on 5th December, 70 at the University Office, Jaipur.

### Present

1. Dr. Raj Krishna.
2. Principal S.L. Doshi.
3. Professor H.C. Jain.
4. Principal S.C. Tela *Convener*

The item of 'recommending courses of Study' postponed last time for the different classes was considered in detail.

### *Resolved to recommend that :—*

- (1) Courses of B.A. Pass I Yr. II Yr. and III Yr. Papers (Vide Appendix 'A' ) be approved.
- (2) The new Scheme of papers in Economics as per Appendix be introduced with effect from the Ist Year T.D.C. Examination of 1973 i.e. the new course for Ist Year T.D.C. class be brought into effect from July, 1972.
- (3) The University be requested to circulate to all the colleges the draft schemes of papers and courses and suggestions from teachers be invited by a certain date, to be fixed by the University. The suggestions be considered by the Board of Studies and Courses finalised.
- (4) The draft of Diploma Course in Operational Economics be approved—(Appendix 'B' ).
- (5) Changes in B.A. Pass Course, B.A. Honours and Post-graduate Courses (vide appendix C) be approved and brought into force from next session.
- (6) For the 1972 examinations of P.U., B.A. Pass I Year, II Year, and III Year, classes the present

courses be repeated after incorporating changes in some of the papers suggested vide Appendix 'C'

- (7) consequent upon the above recommendations necessary changes in the Schemes of Examinations(B.A. Pass Course) be made in the 1972 Edition of the Syllabus to be printed by the University for Ist Year Examination of 1973, IInd Year Examination of 1974 and III Year Examination of 1975.

The meeting ended with a vote of thanks to the chair at 4.00 P.M.

Sd/-S.C. Tela  
Convener.

Appendix A  
FIRST YEAR T.D.C.

*Economic Organisation*

*Note*—This paper is intended to be an introduction to the more advanced treatment of these topics in T.D.C. II Year and T.D.C. III Year.

1. What is an economy ? The nature of the economic problem. Problem of choice and allocation in the sphere of production and consumption. The role of the price system in this allocation.
2. The productive process. Production inputs. Land, labour, capital and organization. Supply of Labour and the population problem. Meaning of capital formation and factors influencing the supply of capital.
3. Circular flow of income. National Income concepts. Relation between saving, investment and income. Inequality for its causes. Factors in Economic development of developing countries.
4. Forms of business organisation. The modern corporation. Public enterprises. Cooperative enterprises.
5. Money and credit in a modern economy. Main features of the monetary system. Central bank and commercial banks. Value of money.
6. The role of the government in economic development.

*Books Recommended :*

- 1 Charles L. Schulze : National Income. Analysis Chs. 1, 2 and 3 Prentice-Hall (India) 1965.
2. Richard T. Gill : *Economic Development—Past and present* Chs. 1 and 5 Prentice-Hall (India) 1965.
3. Samuelson P.A. : *Economics : An Introductory Analysis* Chs. 2 to 6, 10 & 15 (8th Edition).

## APPENDIX A

### *Change to be made in*

*Scheme of Examinations*—1970 Edn. of the University Syllabus.

- (1) Page-LXIII-Economics—at top of page Class-B.A. Pass I Year T.D.C. Arts.

Change to be made—Name of paper to be changed from “Indian Economy” to “Economic Organisation.”

- (2) Page-LXXVI-Economics

Class B.A. Pass II Year T.D.C. Arts

Change to be made—Paper II—Either (i) Elements of Statistics, or (ii) “Problems of Indian Economy” in place of “Economic Planning in India.”

- (3) Page-LXXXV-Economics—bottom of page

Class B.A. Pass Final Yr. T.D.C.

Change to be made—Paper II (i) “Landmarks in Economic Development of U.K., U.S.S.R. and Japan” is to be substituted in place of the old nomenclature i.e. only three countries are to be taught—U.K., U.S.S.R. and Japan.

(For those who have offered “Problems of Indian Economy” in their II Year Examination.)

Or

- (ii) Problems of Indian Economy

(For those who have offered “Elements of Statistics” in their II Yr. Examination).

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*II Year T.D.C. Examination*

There shall be two papers of three hours duration each carrying 100 marks.

Paper I—Micro-economic Theory.

1. Functions of the economic system. Nature and scope of Economics. Relation between Micro & Macro analysis & Static & Dynamic analysis.
2. Utility analysis, Consumers' Surplus. Indifference curves. The derivation of demand curves and income consumption curves from indifference curves. Elasticity of demand. Total revenue and marginal revenue. Income elasticity of demand.
3. Factors of production. Their supply and efficiency. Combination of factors of production. Laws of returns and returns to scale. Optimum factor combinations. Cost curves. The entrepreneurial function. Types of business organisation.
4. Distinctions between perfect competition, imperfect and monopolistic competition, monopoly and oligopoly. Determination of output and price of the firm and the industry, under perfect competition, monopolistic competition and monopoly in the short period and the long period.
5. Factor price determination. Marginal productivity theory. Its application to land, labour and capital. Special characteristics of supply and demand of land, labour and capital. The nature of profit.

Note—A treatment of alternative historical theories is not required.

*Books Recommended—*

1. Stonier and Hague: A text book of Economic Theory  
(English and Hindi Edns)
2. Leftwich R.H. : Price System Resource Allocation  
(English & Hindi Edn.)

## Paper II Either (i) Elements of Statistics

Or (ii) Indian Economy & its planned Development.

*Paper II-(i) Elements of Statistics.*

Nature and uses of Statistics. Methods of sampling. Diagrammatic and graphic representation of data. Measures of central tendency and dispersion, Simple correlation and regression. Interpolation (Newton Method and Binomial Expansion method for intervals only) Index numbers. Analysis of time series. Acquaintance with the following bodies of data and their limitations.

1. Agriculture : area and yield.
2. Industry : Annual survey of industries.
3. Wholesale and Consumer Price Index Numbers.

Surds and Indices. Quadratic equations (one variable) Arithmetic, geometric and harmonic progressions. Permutations and combinations. Binomial theorem. Logarithms. Elements of determinants.

Basic Trigonometric functions and formulas (very elementary treatment)

*Books Recommended :*

1. Ya-Lun-Chou : Applied Business and Economic Statistics.
  2. J. Parry Lewis : Introduction to Mathematics for Students of Economics (chapters 1, 2 & 3 only)
  3. D.N. Elhance : Fundamentals of Statistics (Ch. 33 Section 1 to 3)
-

*T.D.C. II Year**Problems of Indian Economy*

- I. Impact of British Economic Policies on Indian *Economy*. Decline of indigenous industries, Railway policy, Economic drain from India.

II. *Population*.

Growth of population and labour force, occupation distribution, unemployment and underemployment in the Indian Economy.

III. *Agriculture* :

Land utilisation; Cropping pattern, Crop-yields, size and distribution of land holdings subdivision and fragmentation of land growth of irrigation, fertiliser supply and other inputs, Land reforms in India with special reference to Rajasthan Co-operative credit movement. Green Revolution. Food output and food policy.

IV. *Industry & Labour* :

Role of Cottage and Small scale industries in the Economy, Industrial Finance, Industrial Policy and Licensing Policy, Measures to check concentration of economic power.

Trends in wages and productivity. Trade Union Movement. Social Security programmes. Machinery for settling industrial dispute.

V. *Foreign Trade and Foreign Aid* :

Chief items of exports and imports. Foreign trade Policy. Foreign aid-size and utilisation. Problems of repayment.

VI. *Economic Plans in India* :

National income. Sectoral and personal income distribution objectives of Five Year Plans size and pattern of public investment under various plans. Financing of plans. A review of economic progress under planning in India.

## VII. *Economy of Rajasthan :*

A brief review of econmic resources of the State. Land, water, mineral resources and cattle. Size and pattern of public investment in the plans. Agriculture development and industrial growth under the plans.

### *Books Recommended :*

1. V.V. Bhatt : Aspects of Economic change and policy in India 1800-1960 (ch.2)
2. Alak Gosh : Indian Economy : Its Nature and problems, Latest edition.
3. Ruddardutt & Sundaram : *Indian Economy*. Latest edition.
4. Dhiresh Bhattacharya : Understanding India's Economy, Vol. I, and Vol. II (Rev. edn., 1969).
5. Fourth Five Year Plan 1969-74. (Revised)

### *Books for reference (latest issues)*

1. India (A Reference Annual).
2. Economic Survey (Annual).
3. Indian Agricultural in Brief, Tenth edition, 1970.
4. Fourth Five Year Plan and Annual Plans of the Govt. of Rajasthan.
5. Rajasthan Budget Study Annual DES, Jaipur.

### *Journal for reference :*

1. The Economic and Political Weekly.
2. Reserve Bank of India Monthly Bulletin.
3. Yojana (English and Hindi).
4. The Economic Times.
5. AICC Economic Review (English and Hindi).
6. Indian Economic Journal published by Indian Economic Association).

7. Indian Economic Review, Few Series, published by Delhi School of Economics.
- 

*Final Year T.D.C. Examination*

ECONOMICS

There shall be two papers of 3 hours duration each carrying 100 marks.

Paper I—Money, Banking and Public Finance.

1. Nature, functions and importance of Money, The Quantity Theory of money. Index Numbers. Inflation and its impact on the level of economic activity. Principal monetary standards, with a specific study of the monetary system of India.
2. National Income and its components. The Keynesian theory of interest and employment.
3. Modern Banking—Functions of Banks. Multiple creation of credit. Composition of assets and liabilities of Commercial Banks in India. Functions of Central Bank with special reference to India. Main features of Indian monetary policy.
4. International Trade—Distinguishing features of International Trade. Comparative Cost doctrine. Terms of trade. Free trade and protection. Indian tariff policy. The problem of balance of payments.
5. Nature of foreign exchange market. Determination of foreign exchange rate under different monetary systems. Objects and methods of exchange control, I.M.F., I.B.R.D,
6. Public Finance—Nature and importance of Public Finance. Sources of Public revenue. Canons of Taxation. Incidence and shifting of taxes. Canons of public expenditure. Economic effects of public expenditure.

*Books Recommended :*

1. Geoffrey Growth in Outline of Money.  
(English and its Hindi version).
2. Dalton : Public finance.

Paper II—(i) Landmarks in Economic Development of U.K., Japan and U.S.S.R.

(For those who have offered Problems of Indian Economy in their II Yr. Examination).

*U.K.*

Industrial Revolution and its effects. Economic aspects of colonial expansion. Policies for economic stabilisation during 1930, Planning for full employment.

*Japan :*

Development of the Japanese economy during the Meiji Restoration. Agricultural development. A few important facts about principal modern industries. Role of small scale industries. Salient features of Japanese foreign trade. Role of State in economic development, Factors causing post-world War II economic expansion.

*U.S.S.R.*

New Economic Policy. Economic conditions on the eve of the First Five Year Plan. Collectivisation. Soviet agricultural development since 1954. Problems of rapid industrialisation. Recent trends in planning and economic development.

*Books Recommended :*

1. Lipson : Growth of English Society
2. Graf : Economic Development of the U.S.A.
3. Sakai-Tsunoyama : A Concise Economic History of Modern Japan.
4. Alec Nove : Soviet Economy.

*Books for reference (U.K.) :*

1. C.D.H. Cole. : Post-War Conditions of Britain (chs. 13, 14 and Appendix).
2. Phyllis Deane : The First Industrial Revolution (Chs. 5 & 16)
3. L.C S. Knowles : Industrial and Commercial Revolutions, Part II.
4. V. Karkoff : Soviet Economy 1940-1965.
5. G.C. Allen : A Short Economic History of Modern Japan 1962.

*Books for reference (Japan) :*

- 1 J.P. Cohen : Japan's Post War Economy Chs. V and VII.
2. S. Tsuru : Essays on Japanese Economy Chs. 3 to 6.
3. G.C. Allen : Japan's Economic Expansion. Chs. V to X and XII.
4. G.C. Allen : Short Economic History of Modern Japan.
5. Statistical Surveys of Economy of Japan (Last two years.)
6. J.B. Cohen : Economic : Progress of Free Japan. Ch. 2

*Books for reference (U.S.S.R.) :*

1. Shaffer : Soviet Economy
2. Bornstein & Fusfeld : Soviet Economy—A Book of Readings.
3. Alexander Vucinich : Soviet Economic Institutions.
4. Bergson & Kuznets : Economic Trends in Soviet Union (Chs. 4, 5 and 8)
5. V. Katkoff : The Soviet Economy 1940-65).

6. Roy D. Lavid : Soviet Agriculture and Peasant Affairs Ch. 2
6. M.Dobb : Soviet Economic Development since 1971.

Or

(ii) Problem of Indian Economy.

(For those who have offered Elements of Statistics in their II Year Examination).

Course same that prescribed for II Year T.D.C. Examination in this paper.



## APPENDIX B

## Diploma Course in Operational Economics

*Selected Reading Hist.*

The Board of Studies in Economics at its meeting held on 3rd November 1970 has resolved to start a Diploma Course in Operational Economics.

*Objectives :*

The main objectives of the Course are :

- (1) to train students in the basic mathematical and statistical techniques of modern economic analysis; and
- (2) to train them in the practical application of these techniques for solving economics decision Problems at the micro level of the management of a firm and at the macro level of public policy-making at the sectoral, regional and national levels.

As a by product the course will enable teachers and research workers in Economics in our University and its affiliated colleges to acquire knowledge of Quantitative techniques which they may not have done in their previous normal education. Thus the course will also serve as a Refresher course for teachers and research workers.

*Eligibility and Duration,*

The Course will be open to persons holding a second Class Master's Degree in Economics, Commerce, Business Administration, Mathematics or Statistics or at least a Bachelor's Degree in Engineering. The duration of the course will be from 1 to 2 years depending upon the previous training of the students, specially in algebra, calculus and differential equations.

*Syllabus :*

The First Year Course will include the following four papers—

1. Algebra, Geometry and Analytical Geometry,
2. Differential and Integral Calculus, Differential and Difference Equations.,
3. Statistics, and
4. Linear Algebra.

The Second Year Course will include the following four papers :

1. Applied Micro-Economics,
2. Applied Macro-Economics and Planning,
3. Statistical Estimation, and
4. Quantitative Techniques of Managerial Decision-making.

---

*Second Year*

Paper-1 :

*Applied Micro-Economics* : Demand functions and projections. Production functions. Cost functions. Size and technology. Price determination. Factor price determination.

*The growth of the firm* : Finance and investment Sources of finance. Capital budgeting by a firm.

Paper-2 :

*Applied Macro-Economics* : National Accounts. Input-output analysis, Macro models. Growth models. Planning models. Sector planning and project selection. Allocation of public investment. Regional planning.

Paper-3 :

*Statistical Estimation* : Distribution, Co-relation. Multiple regression. Single equation models. Analysis of variance. Analysis of co-variance.

Paper-4 :            *Management Techniques* :

Inventory Models. Linear programming. Queueing theory Systems analysis. Decision-making under uncertainty.

*First Year*

Selected chapters in the Reading list given in the Appendix.

### *Selected Reading List*

Selected Chapters from the following books will be recommended for study.

#### *First Year*

Paper-I. Algebra, Geometry and Analytical Geometry.

College Mathematical (College Outline Series),

Paper-II. *Differential and Integral Calculus. Difference and Differential Equations :*

Allen, R.G.D., Mathematical Analysis for Economists,  
(Macmillan)

Yamane, T. Mathematics for Economists (Prentice-Hall).

Boumol, W.J. : Economic Dynamics ) For Differential and

Allen, R.G.D. : Mathematical Economics ) Difference Equations.

Paper-III. *Statistics.*

Hoel, P.G, Introduction to mathematical Statistics,  
(New York: John Wiley & Sons.)

Brownlee, K.A., Statistical Theory and Methodology in  
Science and Technology.

Paper IV : *Linear Algebra.*

Perlis, S., Theory of Matrices (Mass: Addison-Wesley  
Publishing Co.

#### *Second Year*

Paper I. *Applied Micro-Economics.*

Henderson, J.M., & Quandt, R.E. : Micro-Economics, A.  
Mathematical Approach, (New York: Mc. Graw-Hill  
Book Co.)

Baumol, W.J., : Economic Theory and Operational Analysis (Prentice-Hall)

Bower, J.W. and Welke, W.R. Financial information Systems.

Selected Readings (Boston, Houghton Mifflin), 1968.

Paper II. *Applied Macro-Economics and Planning.*

Allen, R.G.D. Macro-Economic Theory, A Mathematical Treatment (Macmillan)

Bailey, M.J., National Income and the price Level.

Evans, M K.. Macro-Economic Activity, Theory, Forecasting and Control.

Eckaus, R.S., and Parikh, K.S. : Planning for Growth. 1968.

O.E.C.D. : Manual of Industrial Project Analysis in Developing Countries (Development centre for the O.F.C.D., 1968).

Vol. I: Methodology and Case Studies.

Annex to Vol. I: Industrial Profiles.

Vol. II : Social Cost Benefit Analysis by Dittle.  
I.M.D. and Mirrless J.A.).

U.N.L. Mantual on Economic Development projects, 1958.  
MASS, A., et al., : Design of Weter Resource Systems.  
New Techniques for Relating Economic Objectives,  
Engineering, Analysis and Governmental Planning  
Cambaidge, Mass., 1962).

Isard W. and Karawska (Ed.) General Theory, Social, Political, Economic and Regional with particular Reference to Decision-making Analysis.

Marglin, S.A., Public Investment Criteria, (George Allen and Unwin Ltd., London). 1967.

Isard, W., et al, Methods of Regional Analysis : An Introduction to Regional Science M.U.T. Press, 1960).

Isard, W.et.al., Regional Economic Planning: Techniques of Analysis for less Developed Areas, 1961.

Paper III : *Statistical Estimation.*

Brownlee, K.A., : Statistical Theory and Methodology in Science and Enginecring.

Johnston, J. : Econometric Methods.

Christ, C.F., : Econometric Models and Methods (New Delhi's) (Wiley-Eastern Edition, 1970).

Hoel, P.G. : Introduction to Mathematical Statistics  
New York, John Wiley & Sons

Paper IV : *Quantitative Techniques of Managerial Decision-making.*

Haynes, W.W., : Managerial Economics.

Johnston, J., : Statistical Cost Functions.

Brown, M., : On the Theory & Measurement of Technological Change.

Carchman, C.W., Ackoff, R.L. Introduction to Operations Research.

Ackoff, R.L. and Sasieni, M.W., : Fundamentals of Operations research.

Forrester, J.W. : Industrial Dynamics.

Stone, J.R.N. : Mathematic in Social Sciences and other Essays.

Stone, J.R.N., and Croft-Murray, G., Social Accounting and Economic Models,

Dean, J : Managerial Economics.

## APPENDIX 'XVII'

Minutes of the meeting of the Committee appointed by the Board of Studies in Sociology (held on 28th September 1970) held on the 8th February 1971 at 12 noon in the University Department of Sociology, University of Rajasthan, Jaipur.

The following were Present :

1. Dr. Yogendra Singh, Jodhpur.
2. Dr. M.M. Lavania, Ajmer.
3. Shri J.P. Sharma, Beawer.
4. Shri C.S. Somani, Pratapgarh.
5. Dr. Ram Ahuja, Jaipur.
6. Dr. T.K.N. Unnithan, Jaipur (Convener)

Dr. R.N. Saxena and Dr. O.P. Sharma could not attend the meeting).

The Committee considered Resolution Nos. 5, 6 and 7 of the Board of Studies in Sociology (meeting held on Sept. 1970) and made the following unanimous recommendations:-

1. The suggestions received from the various institutions were considered and taken into account in making modifications in the syllabii of various courses.
2. The Committee considered the suggestions of the Vice-Chancellor regarding the Sessional Marks and decided to accept the same in principle but each Department may work out the mode of tests and evaluation of the Sessional in the frame work suggested by him.

Regarding the parts 'B' and 'C' of the Vice-Chancellor's suggestion, it was decided that these matters be taken up alongwith the introduction of the Semester System in our University, if and when implemented.

*Item No. 7.*

The Committee considered the draft resolution prepared by the Chairman, Examination Reforms Committee regarding the Alternative Scheme of courses and examination in Sociology and decided to recommend that in principle the proposal for an Alternative Scheme for M.A. in Sociology be accepted. This may be implemented in accordance with the recommendations of the other Boards of Studies.

The Committee has further resolved to recommend that the modifications/suggestions in regard to the various courses (appended the proposed changes in the Sociology Syllabi of M.A. Previous & Final, B.A. (Hons.) and Three Years Degree Course herewith, in Sociology may be introduced with effect from July, 1971.

Sd/—T.K.N. Unnithan  
(Convener)

## PROPOSED CHANGES : T.D.C.

### *Sociology : First Year*

There shall be one paper of 3 hours duration carrying 100 marks.

Paper—Introductory Sociology

Paper I—The study of Human Society—Nature and Scope of Sociology.

Paper II—(a) Social Norms.

(b) Status and Role.

(c) Forms of Interaction (Social contact, isolation, conflict, competition, cooperation).

Part III—Socialization.

Part IV—Major Groups :

(a) Primary and Secondary Groups.

(b) Quasi Groups,

(c) Rural and Urban Communities,

(d) Crowd and Public.

Part V—Social Control.

(a) Custom and Public Opinion.

(b) Religion and Morality.

(c) Law

(d) Education

Part VI—Concept of Social change.

### *Books recommended :*

1. T.B. Bottomore : Sociology (Chapters—6, 12, 13, 14, 15 and 16).
2. K. Davis : Human Society (Chapters—1, 2, 3, 4, 6, 8, 11, 12, 13 and 22).



*Sociology : Second Year*

There shall be two papers, each of 3 hours duration and each carrying 100 marks.

**Paper I—Social Anthoropology.**

- (a) Social Anthropology—Definition and Scope.
- (b) Race—Its meaning, Races of Man.
- (c) Culture—Its meaning, Theories of Culture Growth.
- (d) Primitive Culture—Religion, Magic, Customs and Law.
- (e) Social Structure—Family; Marriage and Kinship
- (f) Applied Anthropology.

*Books recommended :*

1. Majumdar and Madan—An Introduction to Social Anthropology.
2. दुवे मानव और संस्कृति

**Paper II—Social Problem & Social Change in Indian Society (No Change)****Paper III—(New Paper)***Social and Economic Development*

- (a) Meaning of Social & Economic Development
- (b) Social factors & Social Development.
- (c) Caste, family, religion and Economic Development.
- (d) Economic and Social Development with special reference to Five Year Plans (a brief review).

*Books recommended :*

1. Zimmerman ed : Sociology of underdevelopmnt.
2. Unesco Publications : Social Development. Ed. (1969).
3. Five Year Plans.

## OR

## Paper II—Social Problems and Social Change in Indian Society.

1. Concepts of Social Problem and Social Change.
2. (a) Crime & Delinquency—Concept and Ethology.  
(b) Unemployment and Beggary.  
(c) Problems of National Integration—Language Problem & Student unrest.  
(d) Population Growth and Family Planning.
3. (a) Planned Changes in India—Community Development and Panchayati Raj.  
(b) Social Process and Problems of Urbanisation and Industrialisation in India.

*Books recommended :*

1. Elliott and Merrill—Social Disorganisation.
2. Hansa Seth. Juvenile-Delinquency in Indian Society.
3. Bose, A—Patterns of Population Change in India.
4. Chandrasekhar—Asia's Population Problem.
5. Gore, M.S. Beggar Problem in India.
6. Cormack, M. She who rides a Peacock.
7. Desai Bhartiya. Gramin Samajashastra.
8. Sachidanand (भारत की सामुदायिक योजनाएँ )
9. G.R. Madan—भारतीय सामाजिक समस्याएँ

(English &amp; Hindi Edition).

*Sociology : Third Year*

There shall be two papers, each of 3 hours duration and each carrying 100 marks.

There shall be no practicals in the paper 'Social Survey'.

Paper I—Social Survey.

- (a) Meaning and nature of Social Survey.
- (q) Planning of Social Survey, Statement of Problem Hypothesis, Pre-testing Pilot, Survey and Sampling.
- (c) Schedule. Questionnaire, Interview, Observation
- (d) Data analysis, Coding & Tabulation and interpretation.

*Books recommended :*

1. P.V. Young : Scientific Social Survey and Research.

Paper II—Indian Social Institutions.

- a. Marriage among Hindus and Muslims, Legislation in India relating to marriage. Problems connected with marriage. Dowry, Child-marriage. Widow-marriage, Divorce.
- b. Family—Functions, Forms, Joint Family, Changes in Family.
- c. Varnashra Caste—Origin. Functions Inter-caste relations, changing Patterns-caste & Class, Problems of backward classes.

*Books recommended :*

- Kapadia : Marriage and Family in India (Hindu & English ed).
- Ghurye : Caste Class and Occupation in India (Hindi & English Ed.)
- Phillip Mason : Unity and Diversity in India and Ceylon.

OR

(New Paper)-I—Development of Sociological Thought :

- (a) Western —with reference to German, French. and British Schools in Sociology.
- (b) Indian.

*Books recommended :*

1. Bogardus : Development of Sociological Thought.

*Reference books :*

1. Sociology of India : Ed. by T.K.N. Unnithan & others.  
Proposed Changes : (B.A. Honours)

*B.A. Honours Part I Examination*

Paper IV—Social Change & Social Problems in India :

Concept of Social Change and Social Problems  
Social Change in Contemporary India.

Factors of Social Change : Economic & Technological, Political and Legal, Cultural, Ideological, Demographic. Social Change in Rural & Urban India.

Social Legislation and Social Planning in India after Independence.

Problems of Industrialisation and Social Change.

*Books recommended :*

Mukerji, D.P.	: Modern Indian Culture
Mukerji, D.P.	: Diversities.
Mukerji, R.	: Dynamics of a Rural Society.
Dube, S.C.	: India's Changing Villages.
Marriott, Muckim	: Village India.
Srinivas, M.N.	: India's Villages.
Moore, W.	: Industrialisation and Society.
Wilson, G.M.	: Analysis of Social Change.
Govt. of India	: Social Legislation—Five Year Plans.
Publication	: (Portions), Sadiq Ali Report on Panchayati Raj.

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*M A. (Previous and Final) Sociology  
Changes*

1. Paper I—General Sociology

The Section of books recommended will be as follows:—

1. Kingslay Davis : Human Society.
2. Bottomore : Sociology.
3. Johnson : Sociology : A Systematic Introduction  
(Hindi and English Editions).

All other things including books for reference remain the same.

2. Paper VIII (b) *Criminology*

The last paragraph of the paper i. e. 'i Crime Correction and Social Change-Law, Crime and Social Control-Criminal Justice and Social reconstruction' is deleted.

3. Paper VIII (e)-*Industrial Sociology & Labour Welfare* :

In the section of readings, the complete title of the book of Smelser, i. e. Social Change and Industrial revolution may be written instead of "The Industrial Revolution."

*Proposed Changes : M. A.*

Paper III-*Sociological Theory* :

1. The Nature of Sociological Theory.
2. Parson's Theory of Action Frame of Reference.
3. Sociological Theories of Marx max Weber, Durkheim and Simmel.
4. Functional Theories in Sociology with special reference to Merton.
5. Contribution to Sociological Theory by zetterberg & Hemans.

*Books recommended :*

1. Cohen, P. S : Modern Social Theory.
2. Parsons-Structure of Social Action.
3. Merton-Social Theory and Social Structure.
4. Parsons & Shils-Towards a General theory of action.
5. Faris-Hand book of Modern Sociology.

6. Hemans—Social Behaviour and its elementary forms.
7. Gross—Symposium in Sociological theory.
8. Zetterberg—Axiomatic Theory in Sociology in Lazersfeld.
9. Simmel : The wave of conflicts.
10. Original works of Marx, Max wehber Durhheim & Simmel.  
& Rosenburg language of Social Research.

*Proposed changes : M. A-*

Paper IV—*Social Anthropology*

I—Methods & Models in Social An thropology.  
Structure & Function in Primitive soicety.

II—Aspects of Kinship system.

- A) Daicent, inheritance and succession.
- B) Marriage, Residencce and Terminology.
- C) Marriage and Kinship, Alliance and Descent theories.

III—Marriage, Exchange and Alliance.

IV—Primitive Political System.

V—Primitive Economic System.

*Books recommended:—*

- |                     |   |
|---------------------|---|
| 1. Bohanan.         | Social Anthropology.  |
| 2. Lusy Mayer.      | An Introduction to Social Anthropology.                           |
| 3. Radcliffe Brown. | Structure and Function in Primitive Society.                      |
| 4. Murdock.         | Social Structure.   |
| 5. Bantom.          | The Relevance of Models in Social Anthropology.                   |
| 6. Radcliffe        | African Systems of Kinship and Marriage (Oxford University Press) |
| Brown, A &          | Forde, E (Ed.)  |

*Reference Books*

1. Malinowski. Argonauts of the Western Pacific.
2. Leach, E. R. Political Systems of Highland Burma.
3. Gluckman, Max. Conflict and Politics in Africa.
4. Gluckman, Max. Politics, Law and Ritual in Tribal Society.
5. Levi—Strauss : Structural Anthropology.

*Proposed Changes : M. A.**Paper V. Social Psychology*

1. Contemporary Social Psychology as a branch of Social Science.
2. Group Dynamics, Leadership, Propaganda, Public Opinion, Collective Behaviour, Social Prejudices, Social Tensions.
3. Social and Cultural Determinants of Personality, Basic Personality Structure, Marginal Man, National Character—Its Critical Review.
4. Methods in Social Psychology. Field Theory, Role Theory and Cognitive Theory.
5. Theories of Learning.

*Books Recommended:*

1. Kimball Young. Hand book of Social Psychology.
2. Shariff and Shariff. An outline of Social Psychology.
3. Linton Rolph. Cultural Background of Personality.
4. Kardiner and Minton. The Individual and His Society.
5. Mowrer O. Hobert : Learning Theory and Behaviour.
6. Lindsay. Hand book of Social Psychology.
7. Roger Brown. Social Psychology.
8. Smellser. Theory of Collective Behaviour.
9. Krutch and Krutchfield. Social Psychology.

Paper VII. *Social Change in India.*

- (a) Concept of change. Tradition and Modernization.
- (b) Changes in Marriage, Family, Caste and Kinship.
- (c) Politics and Social Change.
- (d) Demography and social change.
- (e) Planning and Social Change.
- (f) Nature and Direction of Social Change in India.

*Book recommended.*

- |     |                      |  |
|-----|----------------------|--|
| 1.  | Srinivas, M. N.      | Social Change in Modern India (Hindi and English Editions) |
| 2.  | Karve. Irawati,      | Hindu Society. An Interpretation                           |
| 3.  | Kapadia, K. M.       | Marriage and Family in India (Hindi and English Editions)- |
| 4.  | Ghurye, G. S.        | Class and Races in India.                                  |
| 5.  | Bailey.              | Caste and the Economic Frontier.                           |
| 6.  | Mayer.               | Caste and Kinship in Central India                         |
| 7.  | Andre Beteille.      | Caste, Class and Power.                                    |
| 8.  | Turner.              | India's Urban Future.                                      |
| 9.  | Wilbert Morre.       | Industrialization and Society.                             |
| 10. | Five Year Plans.     |  |
| 11. | Indian Constitution. |  |
| 12. | Rajni Kothari.       | Caste in Indian Politics.                                  |
| 13. | M. Weiner.           | Politics of Scarcity.                                      |
| 14. | M. Weiner.           | Party Politics in India                                    |
| 15. | Bailey.              | Politics and Social Change.                                |



16. Rudolph and Rudolph. Modernity of Tradition.
17. M. S. Gore. Urbanization and Family.
18. I. P. Desai Some Aspects of Family in Mahuva.
19. A. D. Ross. Hindu Family in its Urban setting.
20. Ashish Bose. Population Problem in India.

*Proposed Changes : M. A. (New Paper)*

Paper VIII—Optional

*Paper : Sociology of Economic Development*

- (a) Institutional approach in Economics.
- (b) Sociology of Economic institution.
- (c) Sociological aspects of economic growth. Social Institution and Economic Growth in India.
- (d) Sociology of entrepreneurship and economic.
- (e) Ideologies of economic development. Capitalistic socialistic and mixed.
- (f) Cultural factors and economic development. Religion, Values and Customs.

*Book recommended :*

1. Parsons & Smelser. Economy and Society.
2. Bert Hozelitz. Sociological Aspects of Economic growth.
3. A. Hegan. On the Theory of Social Change.
4. Smellser N. Readings on Economic Sociology.
5. Tawney, R. S. Religion and the rise of Capitalism.
6. —dn— The Acquisitive Society.

- |     |                 |  |
|-----|-----------------|--|
| 7.  | Veblen.         | Instinct of Workman-<br>ship.                  |
| 8.  | J. Schumpeter.  | Capitalism, Socialism<br>and Democracy.        |
| 9.  | Maxweber.       | Protestant Ethics and<br>Spirit of Capitalism. |
| 10. | R. N. Bellah.   | Religion and Progress in<br>Modern India.      |
| 11. | Berna.          | Enterpreneurs in Madras                        |
| 12. | Soartt, M. Star | Economic Development<br>and Social Change      |
| 13. | Epestem.        | South Indian Villages.                         |
-

MINUTES OF THE MEETING OF THE ACADEMIC  
COUNCIL HELD ON 13th AND 15th FEBRUARY,  
1971 AT 11.30 A.M. IN THE UNIVERSITY  
OFFICE, JAIPUR.

**Present**

Prof. P.L. Bhatnagar, Vice-Chancellor

*(In the Chair)*

- |                            |                           |
|----------------------------|---------------------------|
| 2. Prof. B.D. Tikkiwal     | 3. Prof. B.L. Saraf       |
| 4. Prof. B. Tayagi         | 5. Prof. Daya Krishana    |
| 6. Dr. Dharmendra<br>Kumar | 7. Prof. G.C. Pande       |
| 8. Prof. G.C. Patni        | 9. Prof. G.S. Sharma      |
| 10. Dr. Indra Pal          | 11. Dr. J.N. Tandon       |
| 12. Dr. K.S. Mathur        | 13. Dr. L.M. Sanghvi      |
| 14. Dr. M.A. Zaidi         | 15. Dr. M.C. Singhal      |
| 16. Dr. M.L. Gupta         | 17. Dr. M.L. Mishra       |
| 18. Prof. N.V. Patwardhan  | 19. Prof. Om Prakash      |
| 20. Prof. P.L. Bhargava    | 21. Principal P.N. Mathur |
| 22. Prof. P.N. Srivastava  | 23. Prof. P.S. Sundaram   |
| 24. Prof. R.C. Mehrotra    | 25. Prof. R.G. Sarien     |
| 26. Prof. Rajkrishna       | 27. Shri R.V. Sakhalkar   |
| 28. Principal S.C. Tela    | 29. Principal Sohan Lal   |
| 30. Prof. S.P. Verma       | 31. Prof. Sarnam Singh    |
| 32. Prof. T.K.N. Unnithan  | 33. Shri U.S. Gaur        |
| 34. Prof. Ziauddin Khan    |                           |

Snri L.P. Vaish, offg. Registrar

*N.B. :* Serial Nos. 6, 13 and 32 were present only on the  
15th February, 1971 and serial Nos. 4, 10, 15, 1  
21, 27, 28, 29 and 31 were present only on 13-2-7  
Rest attended on both the days.

Before proceeding with the business on the agenda the Council recorded its sense of deep grief on the sad demise of Prof. G.C. Chatterji, Ex. Vice-Chancellor of the University. All the members stood in silence for two minutes to pay homage to the departed soul.

1. The Minutes of the meeting of the Academic Council held on 28th October, 1970 were *confirmed*.

2. The council *approved* the Panel of experts for Econometrics and International Affairs for appointment on Committees for selection of teachers under S.20 of the University Hand Book Part II.

3. With reference to its Resolution No. 29 dated the 28th October, 1970 the Council considered the recommendations dated the 30th April, 1970 of the Committee appointed (vide Academic Council). Res. No. 3 dated 29-10-1969) to (i) examine the possibility of providing for a Diploma/Certificate Course for Physical Education or introducing the same as an elective subject and (ii) offer its views on the recommendations of the All India Seminar on Physical Education organised by the University Sports Board in March, 1968.

*Resolved that* consideration of the aforesaid recommendations of the Committee be *deferred*.

Arising out of the above the Council further *Resolved that* a Committee consisting of the following members be appointed to suggest an over-all development programme of the University indicating the order of priority for the various items :

- |                         |            |
|-------------------------|------------|
| (1) Prof. R.C. Mehrotra | (Convener) |
| (2) Prof. Daya Krishna  |            |
| (3) Prof. P.S. Sundaram |            |
| (4) Prof. Raj Krishana  |            |
| (5) Prof. G.C. Pande    |            |
| (6) Prof. P.L. Bhargava |            |

- (7) Prof. Ziauddin Khan
- (8) Prof. Om Prakash
- (9) Prof. R.G. Sarien
- (10) Prof. G.S. Sharma
- (11) Prof. B. Tyagi
- (12) Prof B.L. Saraf
- (13) Prof. B.D. Tikkiwal
- (14) Dean, Faculty of Education
- (15) Principal I.B. Varma, Banasthali
- (16) Principal S.C. Tela, Sriganganagar

4. With reference to its Resolution No. 5 (x) dated the 21st April, 1970 the Council considered the recommendations dated the 5th December, 1970 of the Committee appointed to go into the entire question of B.A. (Honours) Course with a view to raise the standard (*vide Appendix-I*).

Resolved to recommend that the recommendations of the Committge be accepted subject to the following modifications and referred to the Faculty of Arts.

- (I) Year-wise break up of papers for the Honours course may be as under :

*First Year*

- (i) One paper each on  
3 compulsory subjects  
as in the Pass course 3 papers
- (ii) Honours subject 1 paper
- (iii) Subsidiary subject 1 paper

*Second Year*

- (i) Honours subject 2 paper
- (ii) Subsidiary subject 3 paper

*Third Year*

- Honours subject 5 paper

- (II) All students who have passed Pre-University or the Higher Secondary Examination obtaining at least 55% marks in the aggregate be deemed eligible for admission to the First Year of the Honours course.
- (III) Honours course be allowed to be offered in the Second Year of the Three Year Honours Course to a candidate securing at least 55% marks at the First Year (Pass course) examination in the subject he proposes to offer for the Honours Courses. Such a candidate shall also be required to appear in the Honours paper of First Year along with his Second Year Examination.
- (IV) A candidate be permitted to change his honours subject in the second year but such a candidate shall be required to appear in the Honours Paper of the new subject prescribed for the First Year along with his Second Year Examination.
- (V) A student passing the First Year Examination of the Honours Course may be permitted to change over to the Pass course in the Second Year provided that he will be required to clear along with his Second Year examination the paper's of the optional subject which he did not cover in his Honours first year class.
- (VI) A candidate who fails in the Honours subject shall be declared to have failed at the examination and not permitted to appear at the supplementary examination.

*Resolved further* that in case the Faculty does not meet before the annual meetings of the Boards of Studies, the proposed scheme of Honours be brought to the notice of the Board of Studies and they be requested to recommend Courses according to the revised scheme as well as the

existing scheme so that in case the revised scheme is finally accepted it may be possible to implement the same w.e.f. July, 1972.

5. Arising out of the fore-going Resolution No. (4) of these minutes the Council *appointed* a committee consisting of that following members to review the existing B.Sc. (Hons.) Scheme and submit its report to the Council through the Faculty of Science :

- (1) Dean, Faculty of Science (Convener)
- (2) Heads of all the Science Departments of the University.

6. The Council considered whether a candidate who has passed the I M.B., B.S. Examination of a recognised University and is a ward of a Government servant may be allowed to migrate to the Second M.B.B.S. course of the University in the beginning or in the middle of the session if his guardian is transferred to Rajasthan.

In this connection the Council considered the opinion expressed by the Dean, Faculty of Medicine as contained in his letter No.21345/MC/GS/70 dated the 21st November, 1970 to the effect that such a migration might be permitted provided the candidate secured at least 55% marks in each subject at the First M.B., B.S. examination and also secured at least 50% marks at the I.Sc./First Year T.D.C. Science/B.Sc. examination.

*Resolved that* the matter be *referred* to the Faculty of Medicine & Therapeutics for views. The Council, however, observed in this connection that if such a faculty was to be extended it could not be restricted to the wards of Government servants alone

7. The Registrar reported that—(i) the result of as many as 155 candidates who appeared at the Final Year T.D.C. (Arts/Science/Commerce) Examination according to 1966 or 1967 edition of the syllabus remained withheld pending their

clearing one or more compulsory subject (s) in which they failed in the 1970 examination, (ii) according to the scheme of examination in force compulsory subjects were prescribed only for the First Year Examination and not for the Second or the Final Year Examination and (iii) the Vice Chancellor vide his orders dated 14th November, 1970 permitted these candidates to appear in the failing compulsory subject (s) at the examination of 1971 according to the syllabus of 1966 or 1967 addition, as the case may be.

In this connection the Council considered the question of allowing further chance to such candidates for clearing the compulsory subjects.

*Resolved to recommend that* (i) the aforesaid orders of the Vice-Chancellor be confirmed and (ii) the candidates be informed that no further chance beyond the examination of 1971 will be given to them.

8. The Council considered whether candidates passing the Intermediate examination from a recognised Board/University be also deemed eligible for admission to the Honours Part I Course on the same conditions as are laid down for the candidates who join the Honours Part I course after passing the First Year T.D.C. examination of other Universities, together with the opinion of the Dean, Faculty of Arts who favoured the proposal.

*Resolved to recommend* that the aforesaid proposal be accepted and the following consequential amendment to the relevant Ordinances Nos. 204, 222 and 244 of the Univ. Hand Book Pt. II be made :

*“O.204, O.222 and O.244 :*

Insert “Intermediate or” between the words—’ as have passed the and First Year Examination.”

9. The Council considered a proposal of the Director of Tourism, Government of Rajasthan for starting a Faculty of Tourism Studies in the University (*Vide Appendix-II*).



*Resolved that the proposal be referred to the 'Priorities Committee' appointed vide for-going Resolution No. (3) of these minutes.*

10. The Council considered the following proposals of Shri U.S. Gour. Head of the University Department of Adult Education (Teaching Wing) as contained in his letter No. 986-87/70-71 dated the 26th October, 1970 :

- (1) The University should not conduct any Certificate course.
- (2) Bachelor's degree should be the minimum academic requirement for admission to one-year Diploma or one-year Degree course.
- (3) If it is found expedient to continue or start a course or courses while keeping Higher Secondary pass as the admission requirement, the duration of the course or courses should be two years for a diploma and three years for a degree.
- (4) The One-year Course leading to a Certificate in the three foreign languages should be discontinued. The scheme of the first examination at the end of two years for earning a diploma and the second examination at the end of the third year for earning a degree should replace the existing schemes.

*Resolved that the aforesaid proposals be referred to a Committee consisting of the following persons :*

- (1) Dean, Faculty of Arts (Convener)
- (2) Dean, Faculty of Commerce.
- (3) Heads of Departments/Inchrges running the Certificate/Diploma courses.

11. The Council considered whether a teacher in the University or in any of its affiliated colleges should continue

or cease to be a member of a statutory body of the University when he is granted leave with permission to serve elsewhere or deputed to take up an assignment elsewhere.

In this connection it was brought to the notice of the Council that vide its Resolution No. 7 dated 29th October, 1957 it was decided that the seats of members who were away on study leave be considered vacated if the period exceeded one year.

*Resolved to recommend* that (i) a teacher be treated to have ceased to be a member of a statutory body of the University when he proceeds on leave of any kind for a period of one year or more and (ii) if the period of leave granted in the first instance is less than a year and later on extension is granted so that the total absence is one year or more, the person concerned will cease from the membership of the University Bodies when such extension is granted.

12. With reference to the Academic Council Resolution No. 3 dated 22nd March, 1969 under which the proposal of Dr. J.N. Tondon for setting-up a separate Faculty of Agriculture was not accepted and instead it was desired that the State Government be requested to arrange for affiliation of Dayanand College, Ajmer and G.V. College of Agriculture Sangaria for agricultural courses with the University of Udaipur, the Registrar reported receipt of letter No.F.1(30) Edu/Cp6/70 dated the 16th December, 1970 from the Assistant Secretary to the Government, Education (C.VI) Department, Rajasthan, Jaipur informing the University that the proposal of affiliation of these two colleges was not acceptable to the University of Udaipur because (i) the pattern of Land Grant Colleges of the United States of America which the University of Udaipur had adopted in respect of Agricultural Colleges did not provide for the affiliation of colleges in Agriculture and (ii) the system of examination followed by the above two colleges differed with the system adopted by the constituent Agriculture Colleges of the University of Udaipur.

*Resolved that* a Committee consisting of the following members be appointed to suggest measures for developing

and strengthening the agriculture courses of the University including the suggestion for setting-up a separate Faculty of Agriculture for the purpose :

- (1) Prof. R.C. Mehotra (Convener)
- (2) Prof. P.N. Srivastava.
- (3) Prof. Raj Krishna.
- (4) Dr. J.N. Tondon of Dayanand College, Ajmer.
- (5) Shri H.C. Chaturvedi of G.V. College of Agriculture, Arts & Science, Sangaria.

With power to coopt one more member from the Faculty of Engineering.

13. The Council considered a proposal of Shri H.H.A. Bourai, Principal, Maharao Shekhaji Shiksha Mahavidyalaya, Jaipur as contained in his letter No. 283 dated the 5th December, 1970 to the effect that the Shiksha Shastri Examination to be transferred from the purview of the Faculty of Sanskrit studies to the purview of the Faculty of Education for the following reasons :

- (a) The Courses of Shiksha Shastri examination were merely a carbon copy of the B.Ed. courses. As a matter of fact special stress was laid upon the teaching of Sanskrit and Hindi.
- (b) In order to ensure more efficiency in the courses, teaching and organisation of the Shiksha Shastri and in the interest of an ideal comprehensive Unit of Education, it would be desirable to place this examination under the Faculty of Education.

In this connection it was reported to the Council that a similar suggestion had also been made by the Dean, Faculty of Education vide his letter dated 4th January, 1971.

*Resolved* to recommend that (i) the proposal be accepted (ii) the courses of study for Shiksha Shastri be recommended in future by the Board of Studies in Education and the

Faculty of Education and (iii) the following consequential amendments be made to the relevant Statutes, Ordinances and Regulations of the University Hand Book Pt. II :

(I) *S-121 and 121-A :*

*Delete* "Shiksha Shastri—same as for B.Ed.examination" from S.121-A and insert the same in S.121 at an appropriate place under the heading—"Faculty of Education."

(II) *O.51 :*

Under the heading I-Education-Degree "Insert before Master of Education "Shiksha Shastri."

(III) *O.51-A :*

Delete 'Education' from the list of subjects and 'Shiksha Shastri' from the list of Degrees.

(IV) *O.65-IX* (reg. minimum qualifications for teachers in the Faculty of Sanskrit Studies).

*Delete* "For leacturers of Shiksha Shastri classes : At least a second class Shiksha Shastri" and add the same under O.65-V in respect of the Faculty of Education.

7. (V) *O.65XI :*

The minimum qualifications for Principals of Colleges of Shikha Shastri standard be deleted under the heading—"Faculty of Sanskrit Studies"; and instead the same be but under the heading (C) in respect of Faculty of Education.

(VI) *O.66 :*

*Substitute* 'Education' for Sanskrit Studies' in the heading (E) of O.66.

(VII) *O.329 M.2 :*

*Delete* "Shiksha Shastri".

(VIII) The existing set of Ordinances governing the Shiksha Shastri examination numbered as O.329 M-13 to

O.329 M-22 and R.43-C.1 in that behalf as printed at pages 339-343 of Volume XLV of Minutes be *Shifted en-bloz* from the Chapter of Faculty of Sanskrit Studies" to the Chapter of "Faculty of Education" so that the numbers of the Ordinances and Regulations shall be as follows :

<i>Existing number</i>	<i>New number</i>
0.329 M-13	0.329 L-65
0.329 M-14	0.329 L-66
0.329 M-15	0.329 L-67
0.329 M-16	0.329 L-68
0.329 M-17	0.329 L-69
0.329 M-18	0.329 L-70
0.329 M-19	0.329 L-71
0.329 M-20	0.329 L-72
0.329 M-21	0.329 L-73
0.329 M-22	0.329 L-74
R. 43 C.1	R. 43 B-8

14. With reference to 0.115 (clauses d & 1) of the Univ. Hand Book Pt. II where no provision has so far been made for a University Merit Scholarship in the case of the B.Sc., B. Ed. examination, the Council considered a proposal from the Principal, Regional College of Education, Ajmer duly endorsed by the Deans of the Faculties of Education and Science to the effect that provision for award of University Merit Scholarship be made also at the B.Sc.B.Ed. (Final) examination on the usual conditions provided the candidate joins in the same year either M.Sc. class or M.Ed. class in a college affiliated to the University.

*Resolved to recommend* that (i) the proposal be accepted and (ii) consequently the following new clause (e-i) be inserted in 0.115 :

*'O.115 (e-i) :*

One scholarship of the value of Rs. 40/-p.m. to be awarded to a candidate who stands first at the Final Year Examination of the Four-Year integrated. Teacher Education Course in Science and joins either the M.Sc. (Previous) class or M.Ed. class in the University or in any of its affiliated colleges in the same year, provided that he passes the aforesaid Final Year Examination in the first attempt. The tenure of the Scholarship shall be 24 months in the case of candidates joining the M.Sc. (Prev.) class and 12 months for those joining the M.Ed. class."

15. The Registrar brought to the notice of the Council an anomalous position under which Oriental Private candidates admitted to the Second Year T D C. (Arts) vide provisions of O.167 (b) of the University Hand Book Part II were required to clear only such compulsory subjects of for the First Year T.D.C. Examination of the University, whereas according to O.86-A in respect of candidates (other than oriental private) they are required to clear only such compulsory subjects of the First Year T.D.C. examination of the University as they had not cleared at their qualifying examination.

*Resolved to recommend* that candidates appearing under O.167(b) be also required to clear only such compulsory subjects of the First Year T.D.C. examination of the University as they had not cleared at their qualifying examination and (ii) consequently the following amendment be made to O.167 (b) of the University Hand Book Part II :

*O.167 (b) :*

*Substitute*—"to clear the subject(s) of the compulsory group prescribed for the First Year T.D.C. (Arts) Examination of the University if he has not already passed in the same at the qualifying examination" for 'the subjects of the compulsory group prescribed for the First Year T.D.C. (Arts) Examination of the University.'

16. With reference to the observation made by the Inspection Committee (consisting Dr. M. C. Singhal and Dr. I. B. Verma) appointed to inspect the Maharao Shekhaji Shiksha Mahavidyalya, Jaipur in connection with its application for fresh affiliation for B. Ed. standard w.e.f. July, 1970, the Council considered whether B. Ed. classes and the Shiksha Shastri classes could be permitted to run in one and the same institution of the following grounds as indicated by the Inspectors :

- (a) The two degrees viz., 'B. Ed.' and 'Shiksha Shastri' are almost of the same standard, the former trains the teachers for Secondary/Higher Secondary classes while the latter for teachers of Sanskrit and teachers of Sanskrit schools of the same level,
- (b) The minimum qualifications for admission to B. Ed. is Graduation while for Shiksha Shastri it is graduation with Sanskrit as one of the subjects or 'Shastri Examination' which is of graduation level in the Faculty of Sanskrit Studies,
- (c) The duration of the B. Ed. and Shiksha Shastri courses is the same viz., one academic year;
- (d) The schemes of examination and the courses of study for the two Degrees are almost the same and of equal level, and
- (e) Similar equipment and aids are required for the two courses,

*Resolved to recommend* that the B. Ed. classes and Shiksha Shastri classes could be permitted to run in one and the same institution provided the minimum requirements for each are fulfilled separately.

17. The Council considered a proposal for creation/up-gradation of the following posts approved by the University Grants Commission :

- (a) Creation of one post of Reader each in Chemistry, Zoology, Statistics, History and Economics,

- (b) Creation of one post of Research Associate in Economics, and
- (c) Upgradation of the post of Reader in Sociology to that of the Professor.

*Resolved to recommend* that the aforesaid proposal be accepted.

*Resolved further* that a Committee consisting of the following members be appointed to suggest criteria for creation and upgradation of posts in future :

- 1. Dean, Univ. Studies in Arts (Convener)
- 2. Dean, Univ. Studies in Science
- 3. Director, Univ. Commerce College.
- 4. Director, University Law College.

18. The Council considered letter No. FA-13-70 dated the 25th July, 1970, from the Principal, Lal Bahadur Shastri College, Jaipur requesting that he be allowed to arrange lecture classes in the compulsory subjects of General Education/History of Indian Civilisation and Culture on Sundays as the same could not be fitted in the time-table of 4 hours on usual working days there being two other compulsory subjects and eight optional subjects, and the duration of period be permitted as 40 minutes for evening classes.

*Resolved to recommend* that the request of the Principal be *acceded to* as a special case.

19. The Council *considered and accepted* a proposal that the sessional marks obtained by a candidate at the M.A./M.Sc./M.Com. Previous examination be taken into account when he reappears at the same examination to improve his performance under the provisions of 0 169-E of the University Hand Book Part II. In this connection the Council *confirmed* the orders dated 29-9.1970 of the Vice-Chancellor passed in consultaion with the Dean, Faculty of Art to the effect that for this year the sessional marks obtained by such candidates at the examination in the immediately preceding year be taken into account.



The Council also *considered and accepted* another proposal that on the analogy of the provisions contained in 0.169-E a candidate appearing for improvement of division under 0.169 D and 169 F be also not admitted as a regular student in order to restrict admissions.

*Resolved for recommend* further that the following consequential amendments be made to the relevant Ordinances of the Univ. Hand Book Pt. II:

(I) *O.169E and O.169-F:*

Add the following conditions which will be numbered as (iv) in the case of 0.169E and (3) in the case of 0.169F, below the first paragraph of each of the two Ordinances :

“In the case of ex-students who re-appear at the M.A./M.Sc./M.Com. examination, the sessional marks obtained by them at the examination in the immediately preceding year shall be taken into account.”

(II) *0.169-D:*

In proviso No. (i) substitute—“shall not rejoin a college for the purpose” for ‘will not be required to rejoin a college for the purpose,’

(III) *0.169-F:*

In the first para of the Ordinance Second sentence beginning with the words—‘such a candidate’ and ending with the words—‘the purpose’ be replaced by the following sentence :

“Such a candidate shall not rejoin a college for the purpose,”

20. The registrar reported the orders dated 5th October, 1970 of the Vice-Chancellor allowing (on the advice of the Convener of the Committee appointed by the Academic Council vide its Res. No. 28 dated 22.3 1969 for reviewing the Statutes, Ordinances and regulations with regard to the conduct of examinations in the Faculty of Sanskrit studies, and the Dean, Faculty of Arts) Teachers, Women, Inspectors,

Inspecting Officers, Librarians and Library Clerks to appear at the Shastri and Acharya examinations of 1971 as private candidates on the same conditions as are prescribed for the aforesaid categories of students for appearing at the B.A. and M.A. examinations.

*Resolved to recommend* that the aforesaid orders of the Vice-Chancellor be confirmed.

22. The Council considered the recommendations of the Faculty of Medicine & Pharmaceutics made at its meeting held on 26th November, 1970.

*Resolved to recommend* that the recommendations of the Faculty be approved with the following modifications/observations :

(I) *Ref. Recommendation No. (3):*

In 0.65-VII, in column 3 of teaching experience for the post of Principal of a Medical College the existing provision viz., '5 years administrative experience as Head of the Teaching Department in a Medical College' be *deleted* and instead the *following* be written :

"Head of a Department with at least 5 years standing as a professor".

(II) *Ref. Recommendation No. 11(IV):*

In clause No.5 (1) of the proposed S.42 E *insert* the words—"to the Board of Studies in Medicine" between the words—"recommend" and "Course of Study".

(III) *Ref. Recommendation No. 23: Reg: 065-VII*

In para No. IV after the last word—"Registrar" put oblique and further add—"Casualty Medical Officer/ Assisant Pathologist."

22, The Council considered the recommendations of the Faculty of Medicine & Pharmaceutics made at its emergency meeting held on 23rd December, 1970.

In this connection the Registrar reported that the recommendation of the Faculty in regard to the holding of Second and the Final M.B., B.S. examinations again in the month of January, 1971 (December, 1970 examinations having been boycotted by several students) was implemented by the Vice-Chancellor under emergency powers vested in him vide Section 13(4) of the University Act, in consultation with the Dean of the Faculty and the Convener, Board of Studies in Medicine, as authorised by the Faculty for the purpose, in the *following* manner :

- (1) The Second and the Final M.B., B.S. examinations for those candidates who could not take examinations in December, 1970 be held so as to commence from Monday, the 25th January, 1971. Candidates should contact the Principals of their Colleges to receive further necessary instructions and fill in the application forms so as to reach the University latest by the 15th January, 1971. No examination fee be charged from these candidates
- (2) Before the results of December, 1970 examinations (II and Final M.B., B.S.) are published each student of II and Final M.B., B.S. be asked to give his option in writing whether he likes to retain his appearance in December Examination in its entirety or he likes it to be cancelled in entirety and take the January/February, 1971 examinations.
- (3) A student who has partly appeared at the examination of December, 1970 and opts for retention of examination shall be required to appear in the remaining subject(s) in January/February, 1971 examination, his result of the subject(s) in which he has appeared in December, 1970 will be worked out and declared along with the January/February, 1971 Examination.
- (4) The December, 1970 and January/February, 1971 examinations taken together be regarded as single examination and the results of the two will be announced together except for those who do not

exercise their option to take the January/February, 1971 examination and want to retain December, 1970 examination.

- (5) The Principals of the affiliated Medical Colleges be requested to contact each individual student and get his option in writing in accordance with above so as to reach the Registrar's office by 7th January, 1971.

*Resolved that* (i) the report be recorded and (ii) orders of the Vice-Chancellor be confirmed.

23. The Council considered the recommendations of the Faculty of Education made at its meeting held on 30/31st December, 1970.

*Resolved to recommend* that the recommendation of the Faculty be approved with the following modifications/observations :

- (I) *Ref : recommendation No. 2 (II) (b) :*

It was reported that the syllabus for the proposed optional group 'IX-Teaching of Science' had not yet been received from the Dean. The Council therefore, *authorised* the Vice-Chancellor to approve the syllabus if the same was received before the printing of the syllabus.

- (II) *Ref. Recommendation No. 2 (x) (b) :*

The recommendation for adding one more member to the Board of Studies in Education be *not* accepted as it was not permissible under the provisions of the Univ. Act. The Council, *however desired* that the Head of the University Department of Adult Education (Teaching Wing) may be invited to attend the meetings of the Board of Studies in Education, as a special invitee.

- (III) *Ref. Recommendation No. 2 of Faculty with further reference to recommendation No. 4 (5) dated*

*21-9-1970 of the B.O.S. in Education:*

Consideration of the recommendation with regard to the revision of the scheme of Four-Year Teacher Education Course in Science be *postponed* and the same be taken up when the recommendations in that behalf of the Faculty of Science are presented to the Council.

(IV) *Ref : Recommendations No. 3 (II) regarding suggestion for amending S.24 A (2) of the University Act:*

It be *not* accepted.

(V) *Ref: Recommendation No. 4 (III):*

The following provision be made by adding a new paragraph under O.74 of the University Hand Book Part II:

“The maximum number of students in a class for guidance in practice teaching (for the examinations in the Faculty of Education) be 30.”

(VI) *Ref. Recommendation No. 6:*

Consideration be *postponed*.

(VII) *Ref: Recommendation No. 17:*

The recommendation for introducing ‘Educations’ as an optional subject for the B.A. examination of the University be *not* accepted.

24. The Council considered the recommendations of Faculty of Ayurveda made at its meeting held on 21/22nd October, 1970.

*Resolved to recommend* that the recommendations of the Faculty be approved with the following modifications/ observations.

(I) *Ref: Recommendation No. (1) :*

(A) The degree of Ayurvedalankar awarded by the Gurukul Kāngri Vishwavidyalaya be treated as

equivalent to the Ayurvedacharya degree of the University. This be reported to the Equivalence Committee.

- (B) The Second part of the recommendation reg. Ordinances proposed by the Board of Studies being not clear, consideration of the same be *postponed* and the Dean be requested to clarify the same.

(II) *Ref: Recommendation No. (2) :*

The recommendation being not clear, the Dean be requested to specify the Ordinances in which the changes were proposed together with the draft of the changes.

(III) *Ref: Recommendation No. (4) :*

The recommendation be *not* accepted in view of the revision of pay scales for teachers of affiliated colleges recently approved by the Syndicate vide its Res. No. 22 dated 14-12-1970.

(IV) *Ref: Recommendation No. (7) :*

S.126A (reg. the composition of the Faculty of Ayurveda) and S.126 C (reg. the composition of the Board of Studies in Ayurveda) be amended so as to read as follows :

S.126A : The Faculty of Ayurveda shall consist of the following :

- (i) Dean of the Faculty,
- (ii) Principals of all the Colleges affiliated in the Faculty,
- (iii) All Heads of Department within the Faculty in the Colleges affiliated upto degree standard provided they have atleast 8

years experience of teaching degree classes in a subject of the Faculty,

- (iv) Two teacher in Ayurveda other than the Heads of the Departments to be coopted by the Faculty from among the teachers of the Colleges affiliated in the Faculty,
- (v) Two eminent scholars of Ayurveda not being teachers in the colleges affiliated to the University to be coopted by the Faculty, and
- (vi) The Convener of the Board of Studies in Ayurveda if not otherwise included under the fore-going clauses.

*O.126 C :*

There shall be one Board of Studies in Ayurveda constituted by the Faculty of Ayurveda for a period of three years, consisting of not more than 9 members out of whom there shall be at least one internal member to represent each subject and one external member who shall be an eminent teacher in Ayurveda.

*(V) Ref : Recommendation No. (12) :*

Consideration of this recommendation regarding institution of Post-graduate courses in the Faculty of Ayurveda be *deferred* until permanent affiliation is secured by an affiliated college for the Ayurveda-charya standard.

25. The Council considered the recommendations of the Faculty of Sanskrit Studies made at its meeting held on 5th January, 1971.

*Resolved to recommend* that the recommendations of the Faculty be approved with the following modifications<sup>i</sup> observations :

(I) *Ref: Recommendation No. (3)*

The addition and/or alterations to S.124 (regarding the composition of the Faculty of Sanskrit Studies) as suggested by the Faculty be accepted, except the provisions for Shiksha Shastri the same having been proposed to be transferred to the Faculty of Education vide fore-going Resolution No. 13 of these minutes.

The amended S.124 be, therefore, read as follows :

*S.124:*

The Faculty of Sanskrit Studies shall consist of the following :

- (i) The Dean of the Faculty,
- (ii) Principals of all the colleges affiliated in the Faculty,
- (iii) All Heads of Departments of Acharya standard in the colleges affiliated in the Faculty possessing at least 8 years experience of teaching Acharya or Shastri classess,
- (iv) One teacher other than the principal possessing 8 years experience of teaching Shastri classes from each college affiliated in the Faculty upto Shastri standard only, elected by the teachers teaching Shastri classes in the college concerned from amongst themselves;
- (v) Head of the University Teaching Department of Sanskrit not below the rank of a Reader,
- (vi) One Post-graduate Head in Sanskrit in the colleges affiliated to the University in the Faculty of Arts nominated by the Vice-Chancellor,



(vii) The Director of Sanskrit Education, Rajasthan,

(viii) The Convener of the Board of Studies in the Faculty if not otherwise included under the fore-going clauses,

(ix) Two educationists not being teachers in the University or in any of its affiliated colleges, to be coopted by the Faculty.

(II) *Ref : Recommendation No. 6 :*

The recommendation be *not* accepted in view of the revision of pay scales for teachers of affiliated colleges recently approved by the Syndicate vide its Res. No. 22 dated 14-12-1970.

26. The Council considered the recommendations of the Faculty of Law made at its meeting held on the 25th January, 1971.

*Resolved to recommend* that the recommendations of the Faculty be approved with the following modifications/ observations :

(I) *Ref: Recommendation No. 2 (I) :*

The existing courses of study for the paper Legal Remedies prescribed for the LL.B. Third Year examination be *repeated* as desired by the Dean of the Faculty in the meeting.

(II) *Ref: Recommendation No. 2 (II) :*

In this connection the Council *approved* the syllabus of the proposed new Branch VII—Labour Law for LL.M. Part II examination as presented by the Dean of the Faculty in the meeting (*Vide Appendix III*).

(III) *Ref: Recommendation No. 2 (III) :*

Status-quo be maintained.

(IV) *Ref: Recommendation No. (3) :*

The words—"Professor or" occurring in clauses (a) and (b) of the proposed O.65-IV be *deleted*.

(V) *Ref: Recommendation No. (8) :*

Consideration of the recommendation to the effect that LL.B. teaching be deemed to culminate into a Post-graduate Degree, be *deferred* till the decision of the University Grants Commission and the Bar Council of India was known, as the Dean, Faculty of Law informed in the meeting of the Council that the matter was under consideration of the aforesaid Bodies.

27. The Council considered the recommendations of the Research Board made at its meeting held on the 21st November, 1970.

In this connection the Registrar reported that under orders dated 3rd December, 1970 of the Vice-Chancellor, Resolution No. 5 of the Research Board was directly placed before the Syndicate at its meeting held on 14th December, 1970 for approval as it involved award of the degree of D. Litt. and the Academic Council was not scheduled to meet before the University Convocation fixed for 19th December, 1970.

*Resolved that the Registrar's report be recorded.*

*Resolved further to recommend that the recommendations of the Board be approved with the following modification :*

*Ref : Recommendation No. (10)*

The following Note be added to the proposed draft of O.124 :

"For teachers of a standing of at least ten years, the condition of obtaining second division at the

degree examination may be relaxed at the discretion of the Research Board."

28. The Council considered the following :

- (1) The suggestions of the Examination Reforms Committee as modified by the Sub-Committee of the Academic Council appointed vide its Res. No. 14 dated 28-10-1970, as received from Prof. Daya Krishna the convener of the Examination Reforms Committee (*Vide Appendix-IV*).
- (2) Minutes of the meeting of the Committee of Examination Reforms held on 15-1-1971 (*Vide Appendix V*).
- (3) Minutes dated 19-11-1970 of the Committee appointed by the Academic Council vide its Res. No. 14 dated 28-10-1970 (*Vide Appendix-VI*).
- (4) Minutes of the meeting of the Committee appointed by the Examination Reforms Committee held on 11th December, 1970 (*Vide Appendix-VII*).
- (5) Minutes of the meeting of the Sub-Committee appointed by the Examination Reforms Committee, held on 21st May, 1970 (*Vide Appendix VIII*).
- (6) Minutes of the meeting of the Committee appointed by the Academic Council vide its Res. No. 14 dated 28-10-1970, held on 30-1-1971 (*Vide Appendix IX*).

*Resolved that* the aforesaid recommendations be referred to the Faculties of Arts, Science, Commerce and Law, together with the following observations of the Council :

- (I) The Alternative Schemes—'A', 'B' and 'C' may be accepted.
- (II) The Scheme 'A' (full Internal Assessment be allowed for the present only for the M.A., M.Sc., M. Com. and LL.M. examinations.

- (III) A Teaching Department of the University or a Post-graduate Department in an affiliated college will be treated as a Unit for offering Scheme 'A'.
- (IV) For every subject a separate Committee will have to be appointed which will decide the request of the Units for offering Schemes 'A' or 'B'. The same Committee will also decide about the alternative courses for that Unit.
- (V) If more than one Unit is allowed to go ahead with Scheme 'A' in a particular subject, a Coordination Committee for that subject will be set-up which will ensure that proper standards were maintained both in regard to teaching and evaluation and to coordinate efforts to raise standards wherever possible.
- (VI) For Scheme 'B' (which is a mixture of External and Internal Assessment) the External Assessment and Internal Assessment be 70% and 30% respectively. In addition to the examinations mentioned for Scheme 'A', Scheme 'B' may also be permitted in the subject of Honours for the B.A. (Hons.)/B.Sc. (Hons.)/B.Com (Hons.) examinations. In this Scheme 'B' division may be awarded on combined marks of the External and Internal Assessment but passing in the External and Internal Assessment separately should be compulsory.
- (VII) The question whether a mention about the scheme of examination ('A', 'B' or 'C') and of the alternative course be made in the Degree awarded to the candidate was discussed and Dr. G.S. Sharma was requested to examine the legal implications of not mentioning the same.
- (VIII) The introduction of Semester System may be accepted in principle to be tried with Scheme 'A' only.

- (IX) The suggestion for independent evaluation of answer-books for Post-graduate and Honours examinations by two evaluators may be accepted and as soon as this suggestion is implemented the facility of re-examination of answer-books for these examinations should be withdrawn.
- (X) The suggestion of introducing the system of moderation of question-papers may be accepted in principle for both under-graduate and post-graduate examinations and suitable mechanism for that purpose may be evolved.
- (XI) The question of award of External Degrees was dealt with separately by the Council (Vide Res. No. 29 of these minutes).
- (XII) In the opinion of the Council it was not necessary to mention the name of the institution in the marks-sheet. However, a mention about the scheme will have to be made.
- (XIII) With regard to the suggestion of setting up a permanent cell in the University for Examination Reforms the Council observed that the Examination Reforms Committee be treated as standing Committee for the present.
- (XIV) Consideration about the grade marks may be *deferred*.

Referring to Part IV of the Final suggestions of the Examination Reforms in respect of Practical, Viva-Voce and Dissertation, the Council resolved as follows :—

- (i) The fact of a wide disparity in the marks obtained in Theory Papers on the one hand and in the Practical and Viva Voce on the other hand be brought to the notice of the Boards of Studies (wherever Practical tests and Viva-Voce are prescribed) and they be requested to suggest ways and means for improving the situation.

(ii) As regards the disparity of marks in the Theory and Dissertation, the Council *recommended* that only those candidates be permitted to offer Dissertation who secured at least 60% marks in the aggregate at the Previous examination of M.A. M.Sc./M.Com. and this be *implemented w.e.f. the examinations of 1972.*

(iii) *In R. 12, 17 and 20* in regard to the M.A., M.Sc. and M.Com examinations respectively the following paragraph be inserted just before the heading of Sessional work :

“Only such candidates shall be permitted to offer Dissertation/Field work/Survey Report/Thesis in lieu of a paper (if provided in the Scheme of Examination) as have secured at least 60% marks in the aggregate of the Previous Examination.”

29. With reference to the Syndicate Resolution No. 27 dated the 7th November, 1970 the Council considered the following proposal of Prof. K. L. Varma, Member-Syndicate as contained in his letter No. AG-U/2/dated the 9th August. 1970;

“In view of the fact that there is limited accommodation in Colleges of the University and it is well high impossible to admit one and all seeking admission, it would be worth-while for the Academic Council to consider under existing circumstances, the necessity of throwing open the degree and Post-graduate examinations of the University, where no practical work is involved to private candidates and evolving a reasonable and useful scheme for helping such students by lectures etc, at least twice a session.”

*Resolved that* the Syndicate be requested to move the State Government—(a) to amend the University Act to make a provision for private candidature at the University Examinations subject to Ordinances to be drafted by the University, after the alternative schemes of examinations have been accepted by the University Bodies and (b) to modify Section 24-L of the University Act so as to permit academic autonomy to the Teaching Wing of the University.

*N. B. :—*Prof. Raj Krishna expressed his strong dissent with the idea of extending the categories of private candidates with/or without the alternative schemes of courses and examinations.

30. The Council considered the following proposal of Dr. Raj Krishna, Head of the University Department of Economics, as contained in his letter No. D.E./C-1/70/219 dated the 2nd November, 1970 :

“Taking note of the facts: (a) that the number of examinees of the Rajasthan University has now risen to 90,000 and is expected to grow at a rapid rate in the coming years; (b) that the management of examinations on this scale by a single University has become extremely inefficient; (c) that the number of tragedies and injustices suffered by examinees due to utter disharmony between the standards of the Syllabi, standards of teaching-standards of question papers, and standards of examiners, have increased to an unacceptable level; and (d) that the Education Commission as well as eminent educationists have repeatedly urged the decentralisation of examinations; the Academic Council hereby resolves that :

- (1) All M.A. examinations be decentralised in the hands of Post-graduate Departments and Post-graduate colleges with effect from the examinations of 1972.
- (2) All B.A. examinations be decentralised with effect from the examinations of 1973.
- (3) A Standing Committee on Decentralisation of Examinations, headed by the Vice-Chancellor appointed to, implement decentralization within three years.
- (4) The Government of Rajasthan be requested to divide Rajasthan into three zones immediately and require each of the three Universities to affiliate all the colleges in the zones allotted to each University.

Prof. Raj Krishna who was present in the meeting of the Council withdraw his proposals Nos. 1,2 and 3 above in view of the decisions taken by the Council (vide its foregoing Resolution No. 28 of these minutes) on the recommendations of the Examination Reforms Committee :

As regards proposal No. (4) above after hearing the Statement which the Vice-Chancellor had made before the Act Amendment Committee in his individual capacity the Council resolved as follows :— •

The Academic Council recognises the urgency of the problem created by an abnormally large and growing number of students and candidates in the University of Rajasthan in comparison with other Universities in Rajasthan, It, therefore, requests the Vice-Chancellor to propose to the Government of Rajasthan three alternative courses of policy for immediate action in the following order of preference.

- (1) Every University in Rajasthan should have not less than ten thousand and not more than fifteen thousand students/ candidates,
- (2) Rajasthan should be divided into three zones and each of the three-Universities should affiliate all the Colleges in the zone allotted to it; and financial allocations for the three Universities should be revised accordingly, and
- (3) Like the Jodhpur and the Udaipur Universities, the university of Rajasthan should also be made a residential university and a fourth purely affiliating university be established in the State; and grants to the Rajasthan University should be revised accordingly.

31. With reference to the Academic Council Resolution No. 27 of 21.4.1970 approving the introduction of the system of re-examination in the University, the Registrar reported that—(i) the Vice-Chancellor vide his orders dated 19.10.1970 referred the rules of re-examination as contained in 0.157(A)



for a review in the light of actual work-experience, to the original Committee consisting of Prof. G.C. Pande (Chairman) and Prof. K.L. Varma, and (ii) the Committee accordingly reviewed the entire situation and suggested a revised draft of 0.157(A) in respect of the Rules of re-examination.

In this connection the Council considered the revised draft of 0.157(A) as suggested by the Committee (*Vide Appendix-X*) and resolved to recommend that the same be approved with the following modifications :

(I) N. B. No. (3) be re-written as follows :

“(3) Such examinations where only one paper-subject is prescribed and at the post-graduate examinations, a candidate shall be permitted to apply for re-evaluation in one paper only.”

(II) In clause No. (5) *Substitute*—‘Re-evaluators’ for ‘examiners’.

(III) Clause No. (13) be *deleted*.

32. With reference to the Academic Council Resolution No. 23 dated the 28th October, 1970 (read with its earlier Res. No. 2 dated 15-1-1969) the Registrar reported the orders of the Vice-Chancellor appointing four more persons, namely, (1) Prof. G.C. Pátni, (2) Prof. B.D. Tikkiwal, (3) Prof. P.L. Bhargava and (4) Prof. Indra Pal, to serve on the Committee constituted to consider a proposal for the setting up of a Faculty of Social Science.

*Resolved that* orders of the Vice-Chancellor be confirmed.

33. The Council considered the following two proposals of Prof. T.K.N. Unnithan, Head of the University Department of Sociology, as contained in his letter No. 161 dated 20th January, 1971 :

(1) The following categories of Professors be instituted in the University from the academic Session 1971-72.

- (2) (a) Professor Emeritus.
- (b) Honorary Professors.
- (c) Visitine Professors.

- (2) Sabbatical leave be instituted in the University for the benefit of its teachers, with effect from the academic session 1971-72.

*Resolved that* (a) proposal No. 2 be referred to the 'Study Leave Committee' and proposal No. 1 be referred to a Committee consisting of the following members :—

- (1) Prof. R.C. Mehrotra (Convener)
- (2) Prof. G.C. Pande.
- (3) Prof. Raj Krishna.
- (4) Prof. T.K.N. Unnithan.
- (5) Prof. G.S. Sharma.
- (6) Prof. Om Pradash.

34. The Registrar reported that on the advice of the Dean, Faculty of Science, candidates who had already passed the First Year T.D.C.(Sc.) examination in a previous year and were re-appearing at the same examination in 1971 under the provisions of O.153 (B) had been exempted from re-appearing in practical test (s).

*Resolved that* the report be recorded.

*Resolved further to recommend* that for future the following provision be added at the end of O.153 (B) of the University Hand Book Pt. II.

"Such a candidate, if he so desires, may be allowed exemption from re-appearing in the practical test(s) at the time of his re-appearing at the examination; and in that case the marks obtained by him in the practical test (s) last shall be added to the marks secured by him in the theory paper in order to determine his result."

35. With reference to clause No. (1) to O.65 VII (in respect of the minimum qualifications for teachers in Medical

Colleges) according to which all teachers must possess a basic University or equivalent qualification entered in schedules to the Indian Medical Council Act, 1956, except in the non-clinical Departments of Anatomy, Physiology, Bio-Chemistry, Pharmacology and Micro-Biology were non-medical teachers to the extent of 30% of the total posts of the Department may be appointed to posts other than of the Director or Head of the Department who must necessarily hold a recognised Medical Qualification, the Council considered letter dated 21st January, 1971 from Dr. L.M. Sanghvi, Dean, Faculty of Medical & Pharm, & Principal, S.M.S. Medical College, Jaipur suggesting that the above condition of necessarily possessing recognised medical qualification in respect of the Director or Head of the Department of non-clinical subjects be removed from the Ordinance so that non-medical persons could be deemed eligible for appointment to the posts of Director/Head of the non-clinical Departments, for the following reasons :

- (1) On account of the contribution made by non-medical teachers in the field of medical education and following the pattern in more advanced countries of the West, many Universities in the country have now removed this restrictive clause.
- (2) The Association of Physiologists and Pharmacologists of India has also made a similar recommendation.
- (3) It will provide equal opportunity for promotion and placement, without any discrimination in the case of the persons already working. The Government of Rajasthan has recently decided to retire all teachers in Medical Colleges who have attained the age of 55 years which will result into large scale promotions and transfers of teachers in Medical Colleges in Rajasthan on 1.3.71.
- (4) Since the Faculty of Medicine has already met and is not likely to meet until September, 1971, the Aca-

demic Council may consider the matter in view of the urgency.

Considering that it would be desirable to have the views of the Faculty of Medicine in the matter, the Council referred the same to the Faculty and further resolved that in view of the Urgency of the matter as reported by the Dean, an amergency meeting of the Faculty be convened for the purpose.

36. With reference to the Faculty of Education Resolution No. 2 dated 30/31-12-1970 the Council considered the list of books suggested by the Dean, Faculty of Education, vide his letter No. 21198 dated 15-1-1971 for including the same in the books *prescribed for the B.Ed. examination vide Appendix—XI*

*Resolvad that* the aforesaid list of books be approved.

37. The Council considered letter No. F.1(11)Aca/KMM/69/535 dated the 16th April, 1970 from the Principal, Kanoria Mahila Mahavidyalava, Jaipur for disallowing the concession of joining the next higher class in an affiliated/University College three days after the supplementary examination and count attendance from a date not later than two days following the date on which their supplementary examination was over to the students who fail in one or more compulsory subjects at the Main Examination and having passed in other subjects are eligible for admisstion to the higher class as contained in O.198(1), because these students had the advantage of clearing these subjects in several attempts without the risk of being demoted to the lower class.

In this connection it was reported that the Deans of the Faculty of Arts, Science and Commerce had expressed their agreement to the aforesaid suggestion,

*Resolved to recommend* that the suggestion of the Principal, Kanoria Mahila Mahavidyalaya, Jaipur be accepted and consequently the second para of O.198(1) beginning with

the words—‘the attendance of such candidates.....’ and ending with the words ‘as is counted in the case of other supplementary candidates’ be rewritten so as to read as follows :

“Such candidates as fail in one or more compulsory subjects of Hindi, English, General Education/History of Indian Civilisation & Culture/Elementary Mathematics/Elementary Biology at the First Year T.D.C. examination in Arts/Science/Commerce but pass in other subjects shall be required to seek admission to the next higher class not later than 31st July even though they wish to reappear in the aforesaid subject (s) at the ensuing supplementary examination.”

38. The Council considered letter dated the 31st December, 1970 from Smt. Vidyawati Guleri c/o Dr. S.K. Sharma, A-4, Meersali, Ajmer offering an endowment of Rs. 2,000/- to the University for instituting a prize in the memory of her husband Shri Jagdhar Sharma Guleri entitled—‘Shri Jagdhar Guleri—Vidyawati Memorial Prize’ to be awarded every year to the candidate standing first in order of merit at the M.A. Hindi examination of the University.

In this connection the Registrar reported that (i) at present the provision in the Ordinances of the University Hand Book Pt. II existed only for award of Gold Medals for which a minimum endowment of Rs. 4,000/- had been fixed and (ii) an endowment of Rs. 2,000/- would fetch an yearly interest of about Rs. 120/- which was not adequate for award of a Medal.

*Resolved that* Smt. Guleri be informed that according to the Rules, the University could consider instituting a Gold Medal if she offered a minimum endowment of Rs. 4,000/-

39. The Council considered whether the Research Associates working in the University Teaching Departments of

Economics, English, Sanskrit, Hindi, History, Political Science and Chemistry in the grade of Rs. 400-40-800-50-95) be treated at par with the University teachers for purposes of leave/vacation etc., together with the views expressed by the Dean, University Studies in Arts to the effect that the duties of the Research Associates and Lecturers were different in as much as a Lecturer was entrusted with teaching work as his major work while a Research Associate was expected to devote his major period for research work and only a nominal teaching work was given to him.

*Resolved to recommend* that the Research Associates referred to above be entitled to (i) leave on full pay for the 30 days in a year and (ii) all holidays approved for the teaching staff except the summer vacation.

40. The Registrar reported that (i) according to the provisions of O.92 of the University Hadd Book Pt. II application for enrolment together with the enrolment fee and the migration certificate (wherever necessary) was required to be submitted by a candidate so as to reach the Registrar by 1st September in the case of a regular student and 15th September in the case of a private candidate failing which he was not to be permitted to sit for the next ensuing examination of the University, (ii) the provisions of the Ordinance were not being strictly adhered to because of two reasons, namely, (a) the late forwarding of the applications by the institutions and (b) inability of the candidates in some cases to procure migration certificates, and (iii) consequently a large number of candidates were allowed to appear provisionally at the examination pending submission of the migration certificates, and their results had to be withheld.

*Resolved to recommend* that (i) candidates who fail to get themselves enrolled even on payment of late fee of Rs. 3,—by 15th October may be enrolled on the recommendation of the Forwarding Officer on payment of a special late fee of Rs. 25,—latest upto 30th December failing which they be not

permitted to sit for the next ensuing examination of the University and no refund of any fee paid by them be made, (ii) this be notified to all the Institutions and the candidates well in advance and (iii) the following consequential amendment be made to O.92 of the University Hand Book Pt. II :

O.92.

The third paragraph beginning with the words—‘Candidates’ and ending with the words—‘will be permissible’ be re-written so as to read as follows (foot-note remaining un-changed) :

“Candidates who are enrolled after the dates fixed under this Ordinance on account of late submission of application or the fee or, both or for want of a migration certificate shall be required to pay a further fee of Rs. 3/—in each case. Candidates who fail to get themselves enrolled even on payment of a late fee of Rs.3/- upto the 15th October may be enrolled on the recommendation of the Forwarding Officer on payment of a Special late fee of Rs 25/—Candidates who are not enrolled upto 20th December of the year preceding the year of examination shall not be permitted to sit for any of the next ensuing examination of the University and no refund of any fee paid by the candidates till then will be permissible.”

41. With reference to its Resolution No. 9 dated the 20th August, 1970 the Council considered the proposal of the Director, University Institute of Correspondence Studies as contained in his letter No. 33721 dated 31st July, 1970 to the effect that the candidates who already possess a Bachelor's Degree of some other University and seek admission to the Bachelor's Degree Course of the University in some other Faculty be deemed eligible for admission to the II Year T.D.C class instead of I Year T.D.C. class.

In this connection attention of the Council was drawn to the following :

- (i) Its Res. No. 30 dated the 29th October, 1969 to the effect that a candidate who already possesses a Bachelor's Degree of some other University be not admitted to the Bachelor's Degree Course of the University in the same Faculty, provided that if such a candidate seeks admission to the Bachelor's Degree course of the University in some other Faculty he be allowed to do so and admitted to the First Year of the course subject to his being otherwise eligible for admission,
- (ii) According to O.86 A of the Univ. Hand book Pt. II a candidate passing the First Year T.D.C./Intermediate examination from any University/Board recognised for the purpose is eligible for admission to the Second Year T.D.C. class subject to the condition that he appears at and passes along with his second year T.D.C. examination, the First Year T.D.C. examination of the University in such compulsory and optional subjects as were not covered by him at the First Year T.D.C./Intermediate examination but which he offered in the second year T.D.C. class and are prescribed for the First Year T.D.C. examination of the University, and
- (iii) It was, therefore, an anomalous position that a Bachelor's Degree holder was denied the facility of admission to the second year T.D.C. class when the same facility was available to those who had passed only the First Year T.D.C. or the Intermediate Examination.

*Resolved to recommend* that in partial modification of its Res. No. 30 dated the 29th October, 1969 a candidate who already possesses a Bachelor's Degree in Arts/Science/Commerce of some other University be not admitted to the Bachelor's Degree Course of the University in the same Faculty provided that if such a candidate seeks admission to the Bachelor's Degree course of the University in some other Faculty (Arts, Science, Commerce as the case may be) he be



allowed to do so and admitted to the second year of the course subject to his being otherwise eligible for admission, and the same conditions shall apply as laid down in O.86A for those who had passed the First Year T.D.C/Intermediate Examination of a recognised University/Board.

42. The Council considered the following proposal of Dr. Daya Krishna, Prof. & Head of the University Department of Philosophy & Psychology as contained in his letter No. Acd. C/2186 dated 28th January, 1971.

“Considering the persistent student demand that compulsory attendance for purpose of examination be abolished, it be decided as an experimental measure, to abolish it at the Post-graduate level with compulsory 75% attendance at Seminars or Tutorials and be tried only in those institutions which can afford to hold them at least once a week during the period when the University is open.”

*Resolved that* consideration of the proposal be deferred and meanwhile the Heads of the University Teaching Departments interested in the proposal might meet and submit a definite scheme of structuring tutorials, seminars, lectures and percentage of attendance there in with the existing staff.

43. With reference to Resolution No (v) dated 26-11-1970 of the Faculty of Medicine & Pharm. the Registrar reported orders of the Vice-Chancellor dated 28-12-1970 accepting under his emergency powers, the recommendation of the Faculty for amending Ordinance 278G-4 so as to read as follows and making the same effective from 1971.

O.278G-4. The examinations of M.D., M.S. and M.Sc. (Med.) will be held twice a year in may and December.”

*Resolved that* the aforesaid orders of the Vice-Chancellor be confirmed.

44. With reference to the Syndicate Resolution No. 25 dated the 1st February, 1971 the Council considered the following proposals of Prof. K.L. Varma, Member-Syndicate:

- (1) An ordinance be framed authorising the Vice-Chancellor to get marked answerbooks revaluated in any genuine case of injustice coming to his notice and not covered by the existing ordinances concerning scrutiny and revaluation.
- (2) In view of the fact that a student at the post-graduate level is invariably tempted to offer dissertation in lieu of a paper for the former always pays much higher dividend's than the latter it is desirable that the machinery concerning it be reviewed thoroughly so as to ensure real academic efficiency or else the option to offer dissertation in lieu of a paper be abolished.

*Resolved to recommend* that proposal No. (1) above be not accepted.

As regards proposal No. (2) above the Council observed that to further action on the same was necessary in view of the fore-going Resolution No. 28 (ii) of those minutes.

45. The Registrar reported the orders of the Vice-Chancellor dated 2-2-1971 passed by him under his emergency powers to the effect that operation of O.199D-6 relating to the submission of 50% Response Sheets by the students of B.Com. Correspondence Course be suspended for the examination of 1971.

*Resolved that* the aforesaid orders of the Vice-Chancellor be confirmed.

46. The Council considered the following proposals of Dr. Daya Krishna, Prof. & Head of the University Department of Philosophy & Psychology as contained in his letter No. 2201 dated 3-2-1971.

(1) Considering the difficulties experienced with respect to the various requirements for appointment the academic posts

in the University, it be resolved to set up a Committee of Academic Council to review the whole situation and report at its next meeting.

- (2) Considering the fact that the University lacks a basic centre around which the creative activities of the students may be organised, the idea of establishing a Centre for Creative Arts be explored in the University and a Committee be set up to go into the details and report to the Academic Council at its next meeting.

Resolved that a Committee consisting of the following members be appointed to examine proposal No. (1) above and make its recommendations to the Council :

1. Prof. R.C. Mehrotra (Convener)
2. Prof. G.C. Pande
3. Prof. Raj Krishna
4. Prof. Daya Krishna
5. Prof. P.N. Srivastava.

As regards proposal No. (2) above the Council requested the Vice-Chancellor to examine the same in the context of the Hobby Workshop, in consultation with Prof. Daya Krishna and Mrs. C.K. Dandiya, Associate Director & Director-Incharge Univ. Deptt. of Adult Education (Extension Wing under whose charge the Hobby Workshop was functioning.

47. The Council considered the following proposal made jointly by Dr. G.C. Pande, Prof. & Head of the University Department of History & Indian Culture and Prof. R.C. Mehrotra, Prof. & Head of the University Department of Chemistry as contained in their letter dated 31st January, 1971 :

“In view of the Academic Council having accepted the principle of selection grade for lecturers and Readers it is resolved to unify the present three scales into one running scale and to recommend to

the Syndicate to take all necessary steps to implement such a scale by approaching the U.G.C. and State Government.

It is further resolved that till the implementation to the unified scale, a mechanism may be evolved to promote to the next higher grade such lecturers and Readers as have reached the maximum of scale for some time. This is particularly necessary in view of the fact that the present scales have very short spans."

*Resolved that* the aforesaid proposal be referred to the 'Norms Committee' (Appointed vide 'Syndicate Res. No. 10 dated 2nd May, 1969' and with its Res. No. 24 (ii) dated 11/12 August, 1969) with the addition of the two members namely, Prof. Raj Krishna and Prof. P.N. Srivastava.

48. With reference to Academic Council resolution No. 2, dated the 28th May, 1968 recommending creation of a Post of, among others, Professor of Commerce for the Institute of Correspondence Studies and its Resolution No. 22, dated the 22nd March, 1969 recommending, inter alia, that the Head of the Institute of correspondence Studies will be 'Director', the Registrar reported that (a) the Syndicate, at its meeting held on the 1st February, 1971, while considering the recommendations dated 27-1-1971 of the Selection Committee constituted under S.20 for the selection of 'Professor and Director' for the University Institute of Correspondence Studies felt that there was a confusion in respect of the nomenclature of the post as to whether it should be 'Professor' or 'Director' or 'Professor & Director' (b) It was of the view that the designation of the post of 'Director' as recommended by the Academic Council vide its resolution No. 22 dated 22-3-69 referred to above. (c) The Syndicate therefore, postponed consideration of the recommendations of the aforesaid selection Committee and desired that a clarification be sought from the Academic Council in regard to the nomenclature of the post and further ques-

ted the Council to recommend minimum qualification for the post of Director of the Institute of Correspondence Studies.

*Resolved that* a Committee consisting of the following members be appointed to consider the above reference from the Syndicate together with all its implications and the Committee be requested to give its report to the Council at the earliest.

1. Prof. R.C. Mehrotra (Convener)
2. Prof. G.C. Pande
3. Prof. Om Prakash
4. Prof. R.G. Sarien.

The meeting ended with a vote of thanks to the Chair.

Sd/-  
P.L. Bhatnagar  
Vice-Chancellor

Sd/-  
L.P. Vaish  
Registrar

## APPENDIX No. I

*Ref. Academic Council Res. No. 4, dated 13th, 15th Feb., 1971).*

Minutes of the meeting of the Committee appointed by the Academic Council Vide its Res. No. 5(X) dated the 21st April, 1970 to go into the entire question of B.A. (Honours) Courses with a view to raise the standard, held on the 5th December, 1970 at 11 A.M. in the University Office.

## Present

- Prof. G.C. Pande. (*Convener*)  
 2. Prof. S.P. Verma  
 3. Prof. P.S. Sundaram.  
 4. Prof. Daya Krishna.

*Note :* Dr. M.P. Mathur could not attend the meeting.

The Committee discussed the matter thoroughly and recommended that :—

- (a) Like other Universities, the Honours course maybe offered in the First Year of the Third Year Degree course instead of the Second Yr. as at present.  
 (b) The Year-wise break up of papers for the Honours course may be as under :—

*First Year :—*

- |   |           |
|---|-----------|
| (i) One paper each on three compulsory subjects as in the pass course.... | 3 papers. |
| (ii) Honours subject....  | 2 papers. |
| (iii) Subsidiary subject....  | 1 papers. |

*Second Year :—*

- |                             |           |
|-----------------------------|-----------|
| (i) Honours subject....     | 3 papers. |
| (ii) Subsidiary subject.... | 2 papers. |

*Third Year :—*

- |                             |           |
|-----------------------------|-----------|
| (i) Honours subject....     | 4 papers. |
| (ii) Subsidiary subject.... | 1 papers. |

- (c) Students who have passed pre-University or the Higher Secondary examination obtaining at least Second class marks in the aggregate and Second class marks in the subject proposed to be offered for Honours may be deemed eligible for admission to the Honours course. Second class marks 50% or above in the aggregate alone may be considered enough for admission to the Honours course when a candidate proposed to offer for the Honours course a subject which he did not offer at the PUC or the Higher Secondary Exam.
- (d) For a pass, it will be necessary for a student to pass in the Hons. as well as the Subsidiary subject, but the division shall be awarded on the basis of the marks obtained in the Hons. subject alone.

Sd/—Prof. G.C. Pande  
(Convener)

## APPENDIX II

*Ref.-Academic Council Res. No. 9 dated 13th, 15th Feb., 1971).*

Copy of letter No. PA/DTR/70/dated the 23rd September 1970 from the Director, Department of Tourism, Rajasthan, Jaipur to the Honoble Chancellor, University of Rajasthan, Jaipur.

With proper study and direction, Tourism can become a very important factor in the economy of any country. The job opportunities that this Industry has the potential to offer are immense. But with the immense potential, it is also a specialised industry. Specialists will, in the future, be needed to fill in the job-requirements in various capacities.

2. In the circumstance, it will be very essential to equip the present generation and the generations to come, with specialised knowledge of this trade. With the present trends and future requirements, it would become necessary, therefore, to start a Faculty of Tourism Studies in the University of Rajasthan. In the West, where the importance of Tourism has been recognised, facilities for the study of Tourism have been set up, for example, in Hawaii, France, Turin (Italy), Poland, Czechoslovakia, etc. etc. Young men and women looking for worthwhile careers could have a new area in which to cash their talents.

3. The University of Rajasthan would be a pioneer in this respect if it could start a full-fledged faculty. For the Three-Year Degree Course, Tourism could be introduced as a Paper to go along with Geography and Economics. An outline of the Courses to be studied from the Three-Year Degree Courses to the Post Graduate and Research level could be worked out once the idea is approved. The Department of Tourism, Government of Rajasthan, could supply the needed teaching talent.

*Short Notes for detailed writing.*

The importance of Tourism cannot be denied in the economic market. It is therefore felt that it should be made a compulsory part of the curriculum in the Higher Secondary, Degree, and Post-graduate stages at the level of the Higher Secondary Board, and Universities. The East European countries like, Poland and Czechoslovakia have started creating Tourism Consciousness in the student class since they foresee in the present student community the Future Tourist.



At the Higher Secondary stage, this could be included in the Social Studies curriculum. In the Degree Stage, two papers could be provided along with Economics, Geography namely.

(a) Economy of Tourism.

(b) Sociology of Tourism.

A Post Degree Course would be of two years with the following proposed syllabus :

(These proposals/Courses are only tentative, and details could, of course, be worked out).

1. *Sociology of Tourism.*

to include :—

1. *The concept of tourism.*

(a) Tourism in the Wide Meaning :

1. The Hunziker's definition;

2. The definition proposed by the U.N.

3. The relations between :

(i) Tourism and sport;

(ii) Tourism and rest;

(iii) Tourism and Physical culture.

4. Is tourism a kind of leisure ?

The concept of leisure.

The difficulty of thinking about tourism as a kind of leisure.

TOURISM—in the wide meaning—Is a process of Horizontal Social Mobility and namely Tourism is a Temporary change of Place in Space.

(b) Tourism in the narrow meaning :

1. Tourism as a way to getting acquainted with the culture, social life and nature of other countries and as a way to get in touch with them.

2. The importance of personal inter-relations.

TOURISM—in the narrow meaning—Is a temporary chance of place in space connected with getting acquainted with the culture, Social life or nature of other countries and with getting in touch with them.

## PAPER : II

### *The Role of the State in the Field of Tourism.*

to include :—

1. Role of the State in tourism considered within the framework of the responsibility of the State for overall national development.
2. Factors calling for a more active role by the State in Tourism.
3. Degree and extent of the role of the State in the field of Tourism.
4. Forms assumed by State Action in Tourism.
  1. Coordination.
  2. Planning.
  3. Legislation and regulations.
  4. State as entrepreneur in tourism.
5. State's role of stimulation in tourism.
6. For Principal types of Aids that can be granted by the government.
  - (a) Aids designed to reduce the initial cost of investment;
  - (b) Aids designed to help the investor in obtaining loan capital.
  - (c) Aids designed to provide relief on annual charges.
  - (d) Aids designed to yield a minimum yield on capital invested.
7. Instruments of State action in the field of tourism.

## PAPER III.

*Role of the private sector in the development of tourism.*

to include :—

1. Hoteliers;
2. Travel Agencies;
3. Transport Operators;
4. Airlines;
5. Publicity and Advertisement.

## PAPER IV.

*Marketing and its relationship with tourism*

to include :—

1. Concepts of marketing.
2. Organised Sale.
3. Integrated marketing.
4. Aspects of marketing management.
5. Modern Marketing resources.
6. Segmentation of the market.

## PAPER V.

*Management in the field of Tourism.*

to include :—

- 1) Theory of management :
  - (a) Defining the nature and purpose of management in relation to tourism.
  - (b) Review of management theories;
  - (c) Functions of management.
  - (d) Management and the organisational context.
  - (e) Management in the non-private promotional and Service sector.

PAPER VI.

*Tourism and Economics :*

to include :—

1. Tourism—Planning and Facilities.
2. Tourism—Promotional activities.

PAPER VII.

*Practical Work.*

to include :—

To prepare a Project Plan—A short term Tourist development Plan, as part of the Practical work in the Post-graduate Classess.

## APPENDIX III

(Ref. Reso. No. 26 of Academic Council dated 13th and 15th 1971.)

1. Labour Law and Labour-Management Relations in India.

*Books Recommended :*

1. Labour Law and Labour Relations ILI 1968.
  2. Malhotra, The Law of Industrial disputes 1968.
  3. Myer Charles, Industrial Relations 1970.
  4. Kennedy Von. D Usen, Union Government Employers and Trade Unions 1966.
  5. Dhyan S.N.: Trade Unions and the Right to Strike 1970.
  6. Giri, V.V. Labour Problems in Indian Industry 1960.
  7. Indian Labour Year Books.
  8. Report of the National Commission on Labour 1970.
  9. The Study Reports of all groups of NLC on Labour Management Relations in India.
  10. Indian Trade Unions Act, 1926.
  11. Industrial Disputes Act, 1947.
  12. KN. Subermaniam. Labour Management Relations in India 1967.
  13. V.V. Giri, Industrial Relations, 1955.
- II. Comparative Labour Law and Labour Management Relations of the United States, U.K., Australia and India with special reference to public policy and practice relating to Trade Unions, Strikes, Collective Bargaining, Voluntary Arbitration, Dispute Settlement Machinery Including ILO Conventions and Recommendations relating to Labour-Management relations.

*Books recommended :*

1. Everett M. Kassalow, Trade Unions & Industrial Relations-An International Comparision 1969.
2. Citrine, Trade Union Law,

3. A—Flanders Industrial Relations.
4. Flanders & Clegg, System of Industrial Relations in Great Britain.
5. Macdonald, The State and the Trade Unions 1960.
6. Ross & Hartman, Changing Pattern of Industrial Conflict 1960.
7. Ludwig Teller, Labour Disputes and Collective Bargaining 3 Volumes.
8. Mathews, Labour Law, Cases and material 1950.
9. Benjamin, Werne, Summers, The Law of Labour Relations.
10. Shister and Asron, Public Policy and Collective Bargaining 1962.
11. Richard A., Lester, Labour and Industrial Relations 1958.
12. Dhyani, S.N., Trade Unions and the Right to Strike-1970.
13. Foender. Industrial Concilation and Arbitration in Australia 1959.
14. Skyes. Strike Law in Australia.

### III. Legislation and Practice relating to SOCIAL SECURITY, LABOUR WELFARE And WAGES.

#### *Books Recommended :*

1. Moorthy, Principles of Labour welfare 1968.
2. K. N. Vaid, Labour Welfare in India 1970.
3. Nigam, State Regulations of minimum Wages 1955.
4. Raghuraj Singh, The Movement of Industrial Wages in India 1955.
5. Fonseca, Wage Determination and Organised Labour in India 1964.
6. S. Choudhari : Social Security in India and Great Britain 1962.
7. V.N. George, Social Security 1968.
8. Menon, Foundations of Wage Policy 1968.
9. Report of the National Commission on Labour 1970.
10. ILO Approaches to Social Security 1953.

IV. International Labour Organisation Central Organisation of Trade Unions Indian Tripartite system.

*Books Recommended :*

1. J. Follows : Antecedents of the International Labour Organisation 1957.
2. Lowe; International Protection of Labour 1935.
3. Dhyani, S.N. Trade Unions and the Right to Strike 1970.
4. ILO, ILD and India 1957.
5. Kaul, India and ILO 1956.
6. Jenks, the International Protection of Trade Union Freedom, 1957.
7. Govt. of India, Indian Tripartite System 1942-1962.
8. C.K. Johari, Indian Tripartite System, 1961.

## APPENDIX IV

*Ref: Academic Council Reso. No. 28 (I) dated 13th & 15th Feb. 1971.*

The suggestion of the Examination Reforms Committee as modified by the Sub-Committee of the Academic Council to be considered by the Academic Council at its next Meeting on 13th February, 1971.

### Part I—Schemes of Examination

1. That the University give effect to the provision in the Act relating to the idea of 'approved Institutions'. The details of the Scheme are given in the report of the First Meeting of the Sub-Committee of the Academic Council (19-11-70).
2. Pending the effectuation of this Scheme, the proposal for Alternate Scheme of Examination be accepted. The following shall be the three Schemes of Examination.

#### *Scheme A*

This Scheme envisages full internal assessment and Examination. In the first stage, the option for this scheme is proposed to be confined *only* at Post-graduate level. The option; however, cannot be exercised unilaterally. Rather, it is envisaged that the unit desirous of exercising the option shall send a detailed proposal including the courses of study, the nature of examination or examination to be conducted, the method of teaching etc., for consideration and approval by the Academic Council. It is also proposed that there shall be a periodic review of the working of the scheme and in case it is found unsatisfactory, the permission for the option may be revoked by the University.

#### *Scheme B*

Scheme B envisages a mixture of external Examination with internal assessment and can be adopted both at the undergraduate and/or Post-graduate levels. The proportion of marks for internal assessment should be shown separately. The option for Scheme B cannot be exercised unilaterally. The procedure for the exercise of the option for this scheme



should be same as for Scheme A with some further restrictions. For example, the Scheme B should be allowed only for those colleges which have at least two teachers in each subject and which have achieved some academic standing in the University. Also, a special committee be set up for each of the colleges for which the scheme is accepted, so that it may supervise and look into the working of the Scheme.

### *Scheme C*

The Scheme C envisages complete external examination with no internal assessment at all.

### Part II. *Semester System*

With respect of Semester system the Sub-Committee of the Academic Council felt that it should not be for everybody and that it be tried with Scheme A only. However, a detailed scheme was prepared by the Examination Reforms Committee which may be considered, if so desired.

### Part III. *Evaluation & Moderation*

1. It was suggested that two independent evaluations for Post-graduate and Honours Examinations be accepted.

2. That there should be automatic scrutiny of answer-books specially regarding the addition of marks and that instructions regarding sample check to the Head Examiner be formulated as under—

- (a) Scripts of all candidates securing from 57 to 63% marks.
- (b) 20% of the remaining first classes.
- (c) Of all the candidates securing marks upto 5% below the minimum pass percentage.
- (d) 5% of the rest.

3. *Moderation.* In case of External Examination the Committee recommended that to start with moderation be introduced at the Under-graduate level. However it was suggested that for the purpose, of moderation, there should be a panel of 3 moderators for each subject. This should consist of (i) one External member, (ii) one internal member-Con-

vener, Board of Studies or University Professor and (iii) a senior teacher who is actually teaching under-graduate classes.

The Sub-Committee of the Academic Council recommended that it should be extended to Post-Graduate examination also where the various papers be divided in to separate group and that the groups be moderated separately with different external Member in each case. The Academic Council may ask the Board of Studies to suggest the formation of the groups in each subject.

#### *Part IV. Practicals, Viva Voce and Dissertation*

1. The wide discrepancy of marks obtained in the Theory Papers on the one hand and Practicals, Viva-Voce and Dissertation on the other was considered to be a very serious matter and the Committee recommended that the discrepancy should in no case be more than 25%. In case it happens to be more than that it should automatically be reduced within that margin. For computing the discrepancy the average of theory papers in the same year of examination should be taken into account. The Committee also observed that marks above 70% be given in very rare cases only. It also suggested that marks for practicals, Viva-Voce and Dissertation be reduced. However, in view of the extrem gravity of the situation the Sub-Committee suggested that the Academic Council may explore possible other ways of meeting the situation. It may also further ask the Board of Studies to suggest ways and mean to meet the situation.

2. In view of the fact that laboratory facilities for practicals are very different in various college affiliated to the University leading to great imbalance in the examinations conducted at various centres, it was recommended that facilities for conducting experiments be provided to students of such colleges in the vacation at other centres where adequate facilities obtained. This may be tried as far as feasible. Also, in this connection the University should try to get detailed information about the actual facilities available in the colleges.

#### *Part V. Award of External Degree*

The Committee suggested that External degrees be introduced, if necessary, only at the under-graduate level. In this connection the Sub-Committee of the Academic Council suggested that the propos for starting correspondence course in B.A. be explored.

Part VI. *Miscellaneous*

1. The name of the institution in addition to the University should be shown in the marks-sheet also.
2. The idea of setting up a permanent call in the University for Examination Reforms be accepted.
3. The inclusion of the idea of Grade Marks be considered by the Academic Council.

## APPENDIX V

*Ref :—Academic Council Res. No. 28(2) dated 13th and 15th feb. 71.*

The Committee at its final meeting suggested the following recommendations with respect to the examination reforms :

*I. Scheme of Examination.*

The Committee recommended that alternate schemes of Examinations be offered by the University. The following three schemes were suggested for the purpose : Scheme A, Scheme B, and Scheme C.

*SCHEME A.* This envisages full internal assessment and Examination.

This has already been referred, for consideration, to the Academic Council which appointed a Sub-Committee to go into details. The recommendations of the Sub-Committee are contained in the Appendix 'A' of this reports.

*SCHEME B.* Scheme B envisages a mixture of external examination with internal assesment. The proportion of marks for internal assessment. The proportion of marks for internal assesment should at least be 30% and should in no case exceed 50%. Passing separately in both the external and internal examinations is necessary. Also, marks of both the internal and the external examination should be added for purposes of division. But they should also be shown separately. The option for Scheme B should not be exercised unilateraly. The procedure for the exercise of the option for this scheme should be the same as for Scheme A.

**NOTE :** Miss Terway was of the view that marks should be shown separately but not added, while Principal Tela thought that if they are added they should not be shown sparately and in case they are shown separately they should not be added.

*SCHEME C.* The scheme C envisages complete external examination with no internal assessment at all.

The Committee was of the view that option for Scheme A. should be exercised, in the first instance, for Post-graduate courses only, while Scheme B may be exercised either for

Under-graduate or Post-graduate examination or both. It was not considered necessary that an institution should opt uniformly for any one scheme of examination at both the Under-graduate and the Post-graduate level. This obviously would relate primarily to Scheme B.

II. The Committee gave detailed consideration to the changes in examination reforms at Post-graduate and Under-graduate levels as suggested by the Sub-Committee appointed by the Examination Reforms Committee vide decision III(ii) and III(b) in its meeting held on 11.12.1970 (Appendix B) and recommended as under :—

(i) With respect to the changes recommended by the Sub-Committee only recommendation vide Section III(2) be accepted with the addition of III Yr. T.D.C examination also. It was suggested that the scheme be considered in detail by the administration and its comments be placed before the Academic Council. Similarly, recommendations with respect to Post-graduate level vide Section 3(iii) (b) was accepted with the following modifications :

“That the term internal and external examination be deleted and that in case the answer books are more than 100, half of them should be sent to each of the examiner in the very beginning and the other half later on—a procedure that will result in the saving both of labour and time.”

In view of the recommendation of Part III Sec. (iii) (b), it was suggested that for Post-graduate and honours examinations the re-evaluation of answer books be given up.

### III. PRACTICALS, VIVA-VOCE, DISSERTATION :

The Committee considered the discrepancy between the marks in the Theory papers on the one hand and the marks of Viva-voce, practicals and dissertation on the other, and was shocked at the unbelievable discrepancy between the two. (Appendix D). It suggested, therefore, that the discrepancy should in no case be more than 25%. In case it happens to be more than that, it should automatically be reduced within that margin. For computing the discrepancy the average of theory papers in the same year of examination should be taken into account. The Committee also observed that marks above 70% be given in very rare cases only. It also suggested that marks for practicals, Viva-Voce and Dissertation be reduced.

It was brought to the notice of the Committee that laboratory facilities for practicals are very different in various

colleges affiliated to the University and that this leads to great imbalance in the examinations conducted at various centres. To meet this to some extent the committee recommended that facilities for conducting experiments be provided to students of such colleges in the vacation at other centres where more adequate facilities obtained.

#### IV. AWARD OF EXTERNAL DEGREE.

With reference to the question of instituting External Degree in the University it was felt on the whole that the idea is desirable and also that it be confined to B.A. classes only. As for the Hons. & M.A. classes the opinion was against such permission being given especially as these degrees are concerned primarily with academic specialisation which can hardly be achieved by candidates who happen to appear privately. It was also suggested that the experiment be first confined to Arts and Commerce only. As far as B. Sc. courses were concerned, it was felt that it should be conditional on the provision of facilities for doing practical work by the private candidates. Further, it was felt that the students should be allowed to do such work only in institutions which were recognised by the University for such purposes.

#### V. MODERATION.

In case of External Examination the Committee recommended that to start with moderation be introduced at the Under-graduate level. Moreover it was suggested that for purposes of moderation, there should be a panel of 3 moderators for each subject. This should consist of (i) one external member, (ii) one internal member convener; Board of Studies or University Professor and (iii) a senior teacher who is actually teaching under-graduate classes.

#### VI. SEMESTER SYSTEM.

With respect to Semester system of examination, the committee recommended that the scheme presented by the Sub-Committee appointed by the examination Reforms Committee at its meeting held on 21.5.70 for the purpose be examined by the administration and its comments placed before the Academic Council, The Scheme is at appendix (C).

#### VII. MISCELLANEOUS

The name of the institution in addition to the University should be mentioned in the Degree concerned. The same should be mentioned in the marks-list also.

There should be random checking of at least one percent of answer books in each paper, in case it is feasible. Also, an

Examination Cell should be established in the University to undertake this and other work.

### GENERAL

The Committee was of the opinion that many of these changes must be brought about from the next academic session if the feeling of helplessness and apathy amongst teachers and students is to be removed and the general impression that nothing can be done is to be avoided.

The Committee was further of the opinion that in case these suggestions are accepted and implemented an Evaluation Committee consisting of some of the members of this Committee and others who are not members of this committee be constituted which may report and advise on the modifications which may be required in the Scheme so that it may work better. In fact, it is the definitive recommendation of the Committee that a permanent cell concerned with examination reforms be constituted in the University whose membership should change from time to time—preferably each year with some overlapping in membership to provide continuity in thinking about the matter.

## APPENDIX VI

*Ref. Academic Council Reso. No. 28 (3) dated 13th and 15th Feb. 1971.*

The Committee appointed by the Academic Council vide its Res. No. 14 dated 28th October, 1970 not on Thursday, the 19th November, 1970 at 11.00 a.m. in the University Office, Jaipur.

The Scheme 'A' envisages full internal Assessment and Examination.

In the first stage, the option for this schemes is proposed to be confind only at Post-graduatc level. The option, however, cannot be exercised unilaterally. Rather, it is envisaged that the unit desirous of exercising the option shall send a detailed proposal including the courses of study, the nature of examination or examinations to be conducted, the methods of teaching etc. for consideration and approval by the Academic Council. The Unit shall exercise the option only after the proposals presented by it have been approved by the Academic Council. It is also proposed that there shall be a periodic review of the working of the scheme and in case it is found unsatisfactory, the permission for the option may be revoked by the University. In case the Acaedmic Council accepts the optional scheme in principle, it may consider the setting up of a committee which may consider in detail the administrative and academic aspects involved in the question.



## APPENDIX VII

*Ref: Academic Council Reso. No. 28 (4) dated 13th and 15th Feb., 1971.*

Minutes of the Meeting of the Sub-Committee appointed by the examination Reforms Committee held on Friday, the 11th December, 1970 at the University Office, Jaipur.

## III (i)

- (ii) For P.U.C. First Year and Second Year T.D.C. Examinations of the University, the system prevalent in the Punjab University, Chandigarh was favoured. Under this system all the answer books in a paper have to be sent to a Head Examiner or Head Examiners (in instalments of 100 each approximately) at periodical intervals. The Head Examiner makes a sample check evaluation of certain percentage of these answer books. Where the Head Examiner feels that the marks of a candidate(s) need to be revised, he refers the candidate(s) case or cases back to the Co-examiner concerned with his reasons for the same and there by the revision is affected by mutual consultations. Under this system, a test instalment of 10 to 15 answer books has to be sent to the Head Examiner within 24 hours, of the receipt of the answer books and the instructions, for comments and approval of the Head Examiner. The Sub-Committee felt that the sample check evaluation by the Head Examiner(s) should be as follows—

- (a) Scripts of all candidates securing from 57 to 63% marks.
- (b) 20% of the remaining first classes.
- (c) Of all the candidates securing marks upto 5% below the minimum pass percentage.
- (d) 5% of the rest.

- (iii) (b) While the two examiners, external and internal examining the answer books as in (a) above, the marks awarded by them are not shown either inside or on the cover page of the answer books but on

separate sheets provided by the order so that each answer book is independently assessed by the two examiners. Where the awards of the two examiners do not diverge from one and the another by more than 10%, the average of the two will be taken. Where, however, these difference go beyond 10%, the case will be referred to a Third examiners and the average of two nearest awards will be taken.

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## APPENDIX VIII

*Academic Council Reso. No. 28 (5) dated 13th and 15th Feb., 1971.*

Minutes of the meeting of the Sub-Committee appointed by the Examination Reforms Committee 'at' its meeting held on 2nd May to recommend minimum reforms desirable in existing system of examinations. held on the 21st May, 1970 at the University Office.

I.A. The Semester System should be introduced at the examinations both the Under-graduate and Post-graduate levels. For this purpose the academic calender would be as follows :—

July 1 to Oct. 31	First Semester
Nov. 1 to Nov. 7	Break Preparatory to First Semester Examination.
Nov. 8 to Nov. 20	First Semester Examination.
Nov. 21 to Dec. 11	Break
Dec. 12 to April 10	Second Semester.
April 11 to April 17	Break Preparatory to Second Semester Examination.
April 18 to April 30	Second Semester Examination.
May 1 to June 30	Vacations.

B. (i) The promotion of students from the First to the next higher Semester of the Academic year will be automatic.

(ii) A student will be deemed to have passed if he secures (1) 36% marks in the aggregate and (2) 25% marks in each of the subjects offered.

For the purpose of judging the result of student the marks of the candidate in both the Semesters of the academic year shall be taken together.

(iii) If a candidate secures 36% marks in the aggregate but fails to secure 25% minimum in one subject only he may be declared Supplementary in the subject. The Suppl. Examination will be held latest by the middle of the July each year. In the case of subjects where there are practicals, theory and practical will be considered as separate subjects.

In order to pass the Supplementary Examination in a subject a candidate must secure atleast 36% marks in that subject. The marks actually secured by a candidate in the Supplementary Examination will be added to the marks in other subjects for the purpose of awarding division.

- (iv) Candidates who failed at the Main or the Supple. Examinations shall be eligible to appear as Ex. students. Such candidates will have to appear in all the subjects except those for which they have earned exemption, at the relevant Semester Examinations. These candidates can earn exemption from appearing in those subjects in which they have secured atleast 45% marks.
- (v) Practical examinations will be held only once, at the end of the Second Semester of the academic year.
- (vi) (a) In the First Year T.D.C. Examination (i.e. the combined result of the First and Second Semester Examinations in First Year) a candidate will have also to secure (besides satisfying the conditions laid down in Sec. B (ii) at least 36% in the aggregate of the group of compulsory subjects with a minimum of 25% in each of them for a pass.
- (b) If a candidate fails to get 36% marks in aggregate of the compulsory subjects he will be required to appear in those subjects where he fails to secure atleast 36% marks at the next Supplementary Examination.
- (c) If he fails to secure atleast 36% marks in the failing compulsory subject(s) at the Supplementry Examination, he shall not be allowed to continue in the Third Semester (i.e. the First Semester of Second Year Until he is cleared the failing Compulsory subject(s).

## APPENDIX 'D'

Statement showing the number of First Class obtained in Practicals, Vice-Voce, Dissertation out of the total number of candidates who passed at the M.A. Examination from 1967-to-1970.

<i>Examination</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>
M.Sc. Chemistry	48/56	46/52	64/66	76/80
M.Sc. Zoology	14/16	20/20	23/28	33/39
M.Com.	(Dissertation) 17/17	6/7	25/25	33/39
M.Ed.	13/14	29/33	28/35	29/31
Sociology	25/25	23/23	31/32	30/31
Public Administration	8/10	5/5	14/14	10/10
Hindi				106/117 (Viva Voce)
				56/58 (Dissertation)

Statement showing range of discrepancy between Theory Papers & Practicals, Viva-Voce & Dissertation.

<i>Examination</i>	<i>Roll Nos.</i>	<i>Percentage of Theory Papers</i>	<i>Percentage of marks in Practical etc.</i>
Sociology	1969 621	36.3%	62% in Dissertation
Public Administration	1969 659	39.6%	68%

1	Chemistry	1969	2	3	4
			524	38%	62%
			105	29.2%	61%
			113	41.5%	82%
			114	38.7%	73.5%
			115	39.5%	77.4%
		1970	102	38.5%	80%
			150	36.2%	67.5%
			151	37.5%	70%
			125	42.5%	71%
	Zoology	1967			

## APPENDIX No. IX

*Ref :—Academic Council Res. No. 28(6) dated 13th and 15th Feb., 1971.*

Minutes of the Meeting of the Sub-Committee Appointed by the Academic Council held on 30th January, 1971.

The Sub-Committee appointed by the Academic Council made the following observations on the recommendations made in the report of the Examination Reforms Committee—

1. The alternative scheme of Examinations recommended by the Committee for Examination Reforms be accepted. However, it was suggested that Scheme B be allowed in only those colleges which have at least two teachers in each subject which have achieved some academic standing in the University. Also, a special committee to be set up for each of the colleges for which the scheme is accepted, so that it may supervise and look into the working of the Scheme.

2. With respect to recommendation No. 2, it was suggested that two independent evaluations for post-graduate and Honours Examination be accepted.

3. That there should be automatic scrutiny of answer-books, especially regarding the addition of marks and that instructions regarding sample check by the Head Examiner be formulated in the light of the recommendations of the Sub-Committee (Appendix B) of the report of the Examination Reforms Committee.

4. With respect to the recommendation No.3, concerning Practicals, Viva-Voce, Dissertation, the Committee felt that as the matter is very serious, the Board of Studies be asked to suggested possible ways of meeting the situation.

5. With respect to the recommendation concerning laboratory facilities, it was suggested that it be tried as far as feasible. A further suggestion was made the University should find detail about the actual laboratory of facilities available in the various colleges.

6. As regards award of external degrees, the Committee suggested that proposals for starting correspondence course in B.A. be explored.

7. With respect to moderation, the Committee felt that it should be extended to post-graduate examinations also where the various papers be divided in separate groups be and it was suggested that the groups be moderated separately

with a different External Member in each case. As for the formation of the groups, it was suggested that it be done by the respective Board of Studies.

8. With respect to Semester System the Committee felt that it should not be for everybody and that it be tried with Scheme A only.

9. The Committee noted that the name of the institution in addition to the University is already mentioned in the Degree. However, it suggested that be shown in the marks-sheet also.

10. The Committee accepted the idea of setting up a permanent cell in the University for Examination Reforms.

11. The Committee recommended the inclusion of the ideas of Grade Marks for the consideration of the Academic Council. However, it suggested that in the first place it be confined to post-graduate examination only.



## APPENDIX No. X

*Ref :—Res. No. 31 of. Academic Council dated 13th and 15 Feb 1971)*

*Revised Ordinance 157 (A)*

A candidate shall be permitted to apply for revaluation of his/her answer books of any one subject/paper compulsory or optional either for a pass or for improvement of division only, subject to the condition that the candidate either passes or secures division he seeks in the remaining subjects in accordance with the rules applicable to that examination. Such an application in the prescribed form must reach the Registrar's office within 20 days of declaration of result of the examination concerned, except when a candidate has applied for scrutiny of his answer books in which case the application for re-examination should reach the Registrar's office within 15 days of the despatch of scrutiny result. The applications not received on the prescribed form shall be rejected

N. B. 1. At the examinations where more than one subjects are prescribed, the candidate shall be allowed the facility of revaluation in the paper/papers of only one subject.

2. In the examinations where it is necessary for the candidates to secure a minimum aggregate in the total of the subjects/papers for a pass, the re-evaluation will be permitted only in case the candidate secures that required minimum in the aggregate of the remaining papers/subjects.

3. The post-graduate examinations and Such other examinations where only one paper subject is prescribed a candidate shall be permitted to apply for re-evaluation in the one paper only.

4. No re-evaluation shall be permitted in respect of the scripts of Practical examinations and dissertations/thesis etc.

2. The re-evaluation of answer books will be permitted in the case of Main (not Supplementary) examination only.

3. The process of re-evaluation includes the scrutiny of answer books and therefore, it will not be necessary for a candidate requesting for re-evaluation of answer books to

apply for scrutiny of answer-books prior to re-evaluation. He may apply for re-evaluation directly or after scrutiny as the case may be, in accordance with the provisions of this ordinance.

4. A candidate shall be required to pay a fee of Rs. 35/- per paper (not subject) for re-evaluation of answer book(s) inclusive of scrutiny fee. In case the candidate applies for scrutiny and thereafter applies for re-evaluation, he shall be required to pay Rs. 35/- per answer book(s) in addition to the scrutiny fee of Rs. 10/- already paid by him.

5. Two independent re-evaluators (One of whom shall be as far as possible from outside the University) shall be appointed for re-evaluation.

6. The result of reevaluation shall be worked out by taking into account the average of two awards, the difference between which is the least out of the 3 awards available with the University (i. e. one award of the original examiner and two received from two re-evaluators). In case two awards are equidistant from the third award, the average of all the three awards shall be taken into account.

7. The award worked out as a result of re-evaluation of scripts shall be taken into account only to the advantage of the candidate and only if it changes the character of result of the candidate, viz., if the candidate passes instead of failing in the subject paper or if he gets the percentage of marks required for a higher division in the examination concerned.

8. In case a candidate applies for re-evaluation in more than one paper in a subject, the result of such a candidate for re-evaluation shall be worked out by taken into account the to increase in the marks arrived at as a result of re-valuation in all the papers in which re-evaluation has been applied for in accordance with the rules.

9. Each re-evaluator shall be paid remuneration at the rate of Rs. 5/- per script besides the expenditure incurred by him as postal charges etc.

10. If as a result of re-examination the character of the result of a candidate changes. Half the revaluation fee deposited by him shall be refunded.

11. If the Vice-Chancellor, on the basis of the awards received from the re-evaluators, feels that the original exa-

miner had not been fair in assessment, he may be debar such an examiner from the future examinership of this University for a period of 1 to 5 years.

12. The answer-books shall not be subject to any inspection or production before any external or internal authority except at the instance of the Registrar or the Vice-Chancellor.

13. Not with standing any thing contained in the Ordinances the decision of the Vice-Chancellor in all matters relating to the re-evaluation shall be final.

## APPENDIX XI

(Ref: Res. No. 36 dated 13th and 15th Feb, 1971 of Academic Council)

Res. No. 2 (XI) dated 31/12/70 of the Faculty of Education and Books for B.Ed. Res. Nos. 15 & 16 of B.O.S. in Education dated 21-9-1970.

- Paper I      Philosophy of Education  
 जिज्ञा, उसकी मरुतरी और प्रथम सिद्धान्त डा. चरण दास शास्त्री और जुगल किशोर जर्मा ।
- Paper II      Educational Psychology  
 बाल मनोविज्ञान—एम.ए. जाह  
 1. प्रकाशक—आगरा विश्वविद्यालय, आगरा ।  
 2. प्रयोगात्मक मनोविज्ञान—आर. आर. त्रिपाठी, आगरा वि. वि. आगरा ।
- Paper VI      Specialization in Educational & Vocational Guidance.  
 व्यावसायिक निर्देशन के सिद्धान्त एवं प्रविधियां ।

MINUTES OF THE MEETING OF THE SYNDICATE  
HELD ON 10TH MARCH, 1971 AT 10.30 A.M.  
AT THE UNIVERSITY OFFICE, JAIPUR.

Present

Prof. P.L. Bhatnagar, Vice-Chancellor  
(*In the Chair*)

2. Dr. B.N. Consul
  3. Shri D.C. Swami
  4. Prof. G.C. Pande
  5. Prof. G.S. Sharma
  6. Dr. G. Narayana
  7. Shri K.C. Bakiwala
  8. Dr. K.C. Khanna
  9. Prof. K.L. Varma
  10. Principal M.L. Agarwal
  11. Dr. M.P. Mathur
  12. Principal P.N. Mathur
  13. Principal (Mrs.) Rama Kochar
  14. Principal S.C. Tela
  15. Principal Sohan Lal
- Shri L.P. Vaish, Offg. Registrar

Before proceeding with the business on the agenda the Vice-Chancellor on behalf of the Syndicate and on his own behalf accorded a cordial welcome to the new members viz., Prof. G.S. Sharma, Principal M.L. Agarwal and Dr. B.N. Consul.

The Syndicate also placed on record its appreciation of the services of the outgoing members viz., Prof. R.C. Mehrotra, Principal P.C. Jain and Dr L.M. Sanghvi.

1. The Syndicate took up for confirmation the minutes of its meeting held on 1st February, 1971 and in this conne-

ction considered the comments received from Prof. K.L. Varma and Principal S.C. Tela.

*Resolved that* the minutes be confirmed with the following observations/modifications :

(I) *Read* 'mammal' in place of 'mammab' and 'for' in place of 'four' in the titles of these at serial Nos. 11 and 14 respectively, in Resolution No. 19 (i) of the minutes.

(II) The first part of Resolution No. 30 be read as follows :

"The Syndicate appreciated the work done by the Committee and *resolved that* (i) the recommendations made by it be approved and (ii) the Managements of all the non-Government affiliated colleges be asked to get the revised Agreement Forms executed by the existing members of the staff including the Principals as well, in supersession of the old Agreement Forms."

*(Establishment Section)*

Section 'A'

2. The Syndicate considered the requests of the following persons for granting study leave as per particulars mentioned against each :

- |  |   |
|--|---|
| (i) Shri Harsharan Singh,<br>Director of Physical<br>Education,<br>University School of<br>Commerce. | Study leave for one year in the first instance from September, 1971 so as to enable him to join the Master's Course in Physical Education and also to accept a teaching assistantship for the session 1971-72 at the Illinois University, U.S.A. on a stipend of 2,088. |
|--|---|

- |  |   |
|--|---|
| (ii) Shri D.P. Bhargava,<br>Director of Physical<br>Education, Rajasthan<br>College, Campus. | Study leave for two years from<br>July, 1971 so as to enable him<br>to join the Master's Course in<br>Physical Education at the Laxmi<br>Bai College of Physical Edu-<br>cation, Gwalior. |
| (iii) Shri R.K. Sangwan,<br>Aquatic Coach.   | Study leave for 2 years so as to<br>enable him to join the Master's<br>Course in Physical Education<br>at the Laxmi Bai College of<br>Physical Education, Gwalior.                        |

In this connection it was brought to the notice of the Syndicate that (i) study leave had been granted in the past to one or two members of the staff of Physical Education, (ii) according to the existing Study Leave Rules study leave was admissible only to the teachers and (iii) the question of treating Physical Education personnel as teachers was under consideration of the Academic Council.

*Resolved that* (i) the leave asked for by Shri Harsharan Singh and Shri D.P. Bhargava be granted as leave without pay for the purpose stated by them, (ii) the matter of converting the aforesaid leave into study leave be considered if it is finally decided by the Syndicate to treat them as teachers and (iii) the request of Shri Sangwan be *not* acceded to in view of the fact that he had already availed of such leave during the year 1967-68.

3. The Syndicate considered a request dated the 2nd December, 1970 of Mrs. Kanta Ahuja, University Lecturer in Economics, duly recommended by the Head of the University Department of Economics and the Dean, University Studies in Arts, for granting permission to her to accept a consultancy honorarium of Rs. 500/-p.m. from the US AID for completing the research project which was for a period of 2½ years.

*Resolved that* the aforesaid request of Mrs. Ahuja be acceded to, but she be informed that no special leave for this purpose would be granted to her.

4.      The Registrar reported that Dr. R.N. Varma, University Reader in Law would attain the age of superannuation (viz., 60 years) on 21st May, 1971.

In this connection the Syndicate considered a letter No. 32 dated 9-2-1971 from the Director, University School of Law recommending extension in service to Dr. Varma in view of his fit state of health and nature experience-

*Resolved that* extension in service for two year effect from 22nd May, 1971 be granted to Dr. Varma.

5.      The Registrar reported that—(i) Shri Harsaran Das Rastogi, Book-lifter and Shri Sita Ram, Bus Driver of the University Maharani's College attained the age of superannuation on 24-11-1970 and 11-12-1970 respectively and (ii) both the persons were, however, continuing in service and the Director, Maharani's College vide her letters Nos. 5409 and 5806 dated 11-1-1971 and 29-1-1971 respectively requested that owing to exigencies of service both Shri Harsaran Das Rastogi and Shri Sita Ram be granted extension in service upto the end of the current academic session.

*Resolved that*—(i) Shri Sita Ram, Bus driver be granted extension in service upto the end of the degree examinations (Main) of 1971 and (ii) the services of Shri Harsara-Das Rastogi, Book-lifter be terminated w.e.f. the date on which this decision is communicated to him and the intervening period be treated as extension in service, as a special case, so as to regularise his continuance in service beyond the age of superannuation.

*Resolved further* that in future—(a) Heads of all the Departments/offices be requested to move cases of extension in service after the age of superannuation, six months in ad-



vance and (b) a notification be issued to the effect that every employee should inform his Head of the Department/office in writing the date on which he attains the age of superannuation and such information shall be given by him six months in advance.

6. The Syndicate considered the minutes of the Selection Committee constituted under S.20 for the selection of a Lecturer in French. (*Vide Appendix-I*) and noted that no candidate was found suitable by the Committee.

*Resolved that the minutes be recorded.*

7. With reference to its Resolution No. 10 dated the 2nd May, 1969 read with its Resolution No. 24 (ii) dated 11/12th August, 1969 the Syndicate *postponed* consideration of the recommendations of the Committee appointed by it for determining seniority rules for University teachers and suggesting norms for promotion of Lecturers to selection grade.

8. The Syndicate considered a proposal of Dr. Y.K. Gupta, University Reader in Chemistry as contained in his letter dated 25th January, 1971 and 8th February, 1971 to the effect that headship of a Department should be given to every senior person in the Department by rotation.

*Resolved that Heads of the University Teaching Departments be requested to convene meetings of their Staff Councils and Staff Committee to discuss ways and means for improving the existing working for the Departments and send their suggestions for Consideration of the Syndicate.*

9. The Syndicate considered the request of Dr. Rama Kant, University Lecturer in Political Science, duly recommended and forwarded by the Head of the Department of Political Science and the Dean, University Studies in Arts for granting one year's study leave w.e.f. 1st April, 1971 so as to enable him to work at the Jawaharlal Nehru University on a project entitled 'Nepal-China Relations' as a Research Fellow of the Indian Council of Social Science Research.

In this connection the Syndicate noted that Dr. Rama Kant would receive a grant-in-aid of Rs. 24,670/- as a Research Fellowship which would include besides T.A. and contingent expenditure, his basic pay and allowances for that period during which the fellowship was tenable.

*Resolved that* Dr. Rama Kant be granted study leave on half pay in view of the fact that he would be maintaining his family in Jaipur.

10. With reference to its Resolution No. 4 dated the 1st February, 1971 the Syndicate considered the request of Dr. Rama Kant Mittal, University Lecturer in Chemistry for counting the period of leave without pay, in accordance with O.357B-1(b) of the University Hand Book Part II, and Rule No. 10 of 'Study Leave Rules', from 24-10-1967 to 24-10-1970 towards earning his three annual grade increments, which he would have earned on 19th October, 1968, 19th October, 1969 and 19th October, 1970 if he had not proceeded on leave without pay.

*Resolve that* the aforesaid request of Dr. Mittal be acceded to.

11. The Registrar reported orders dated the 21st February, 1971 of the Vice-Chancellor granting leave preparatory to retirement on full pay from 25th February to 12th April, 1971 to Shri C.L. Singhal, Registrar and appointing Shri L.P. Vaish, Deputy Registrar (Estt. & Admn.) to officiate as Registrar during the leave vacancy of Shri Singhal.

In this connection the Syndicate considered—(i) the request of Shri C.L. Singhal for granting him leave on full pay for four months w.e.f. 25th February, 1971 preparatory to retirement and (ii) the question of granting annual grade increment of Rs. 50,-p.m. raising his pay from Rs. 1,300-to 1,350/-p.m. which would fall due to him on 17th March, 1971 when he would be on leave.

*Resolved that* (i) the aforesaid orders of Vice-Chancellor granting leave to Shri Singhal from 25th February to 12th

April, 1971 be confirmed, (ii) further leave preparatory to retirement on full pay from 13th April to 24th June, 1971 be granted to Shri Singhal so as to make the total period of leave as four months (Shri Singhal had 9 months and 7 days leave on full pay and 22 months leave on half pay at his credit and (iii) the next annual grade increment referred to above be granted to Shri Singhal as a special case.

The Syndicate also placed on record its appreciation of the valuable services rendered by Shri Singhal to the University almost since its inception in various capacities.

12. The Syndicate *postponed* consideration of the recommendations dated the 25th November, 1970 of the Committee appointed by it vide its Res. No. 9 dated the 27th September, 1969 for suggesting the number of Directors of Physical Education for the various teaching units of the University, together with its financial implications.

### SECTION 'B'

13. The Registrar reported the following orders of the Vice-Chancellor :

- (i) With reference to Syndicate Resolution No. 16 dated the 4th July, 1970 sanctioning one year's study leave to Dr. (Miss) Sushila Agarwal, University Lecturer in Political Science, *orders* dated the 23rd January, 1971 permitting Dr. (Miss) Agrawal to avail of one year's study leave on half pay w.e.f. 4th January, 1971 in continuation of winter-break.
- (ii) With reference to Syndicate Resolution No. 10(ii) dated the 14th Dec., 1970 confirming V.C.'s orders dated 28-11-1970 granting duty leave to Dr. S.P. Varma, Prof. & Head of the University Department of Political Science for the dates mentioned *below* for delivering lectures at the Universities mentioned against each, *orders* dated 23.1.71 granting duty leave to Dr. Varma for the period from

28th January, 1971 to 3rd February, 1971 for delivering lectures at Gujarat University in place of leave granted earlier :

22nd to 28th Oct., 1970    7 days Jamia Millia

2nd to 6th Nov., 1970    5 days Islamia

7th to 14th Nov., 1970    8 days J. & K. Univ.

\*30th Nov., to 5th Dece—

mber, 1970                      6 days Gujrat Univer-  
sity.

\*N.B. : This leave was not availed of by him.

- (iii) With reference to Syndicate Resolution No. 3 dated the 28th Sept., 1970 sanctioning study leave on half pay for one year to Dr. C.M. Kachhawah University Lecturer in Physics with effect from 1st October, 1970, *orders* dated 24.2.1971 treating his study leave on half pay for one year from 21.10.1970 to 20.10.1971 instead of from 1.10.1970 to 30.9.1971.
- (iv) Orders dated 13.2.1971 permitting Dr. Iqbal Narain, Professor of Political Science to attend a Conference on Research Areas in Developing Countries organised by the Centre for Comparative Studies in Technological Development and Social change, Minnicopolis, Minnesota (U.S.A.) and which would be held either in the least week of March or in the first half of April, 1971 without any financial liability to the University.
- (v) Orders dated the 27th January, 1971 appointing afresh the *following* University Teacher's Hostel consultative Committee of 7 members, in pursuance of Rule No. 10 of the 'University Teachers Hostel Rules' (approved by the Syndicate vide its Res. No. 22 dated 24.11.1965 read with its

Resolution No. 27 dated 2.7.1966) for a term of three years w.e.f. 1.2.1971 :

- (1) Two Senior University teachers not below the Readers' rank—one of whom to be nominated as Chairman,
- (2) The Chief warden, University Campus Hostels,
- (3) Two residents of Teachers Hostel to be nominated by the Chairman,
- (4) The Dy. Registrar (G.A.D.)
- (5) The University Engineer

*Resolved that* the aforesaid orders of the Vice-Chancellor be confirmed.

*(Examination and Secrecy Section)*

SECTION 'A'

14. *Resolved that* as unanimously recommended by the Referees the degree of Ph.D. of the University be conferred upon the following candidates on the subject noted against each :

S.No.	Name	Subject
1.	Shri Ashwini Kumar	"Studies on growth, Physiology and bio-chemistry of some plant tissues in tissue culture."
2.	Shri S.K. Jain	"Studies in the chemistry of some heterocyclic compounds."
3.	Shri S.K. Mukherji	"Studies of metal chelates of hydroxylamine analogues."
4.	Shri S.N. Sharma Vappulari	"Weeds of the Indian Botanic gardens, Sibpore, Howrah, West Bengal (A systematic study)".

5. Shri S.R. Bindal      “Organic derivatives of metals of group III B with special reference to gallium.”
6. Shri Gajanand Mishra      “राजस्थान के हिन्दी साहित्य की पृष्ठभूमि पर जयपुर के हिन्दी कवियों के योगदान का मूल्यांकन”
7. (Miss) Nandini Nandchal      “Studies on neurosecretion of *Gryllobates sigillatus* Walker.”

15.      The Syndicate considered a letter No. F.B.G. Union/71/837 dated the 25th January, 1971 from the General Secretary, National Federation of the Blind Graduates, Delhi for exempting the blind students from payment of the charges payable to the amanuenses for writing their answers.

*Resolved that* charges payable to the amanuenses in the case of blind candidates be borne by the University and the rate of payment be decided by the Vice-Chancellor.

16.      With reference to Syndicate Resolution No. 16 dated the 28th September, 1970 confirming the action of the Principal, Nehru Memorial College, Hanumangarh in rustivating under O.88 (b) of the University Hand Book Pt. II Shri Nomesh Chandra Tyagi, a student of III T.D.C. (Sc.) of his college for the current academic session for grave misconduct on the 19th August, 1970, as communicated vide Principal's letter No. NMG/70-71/2226/BYS dated the 20th August, 1970 the Syndicate considered letter dated the 9th December, 1970 from the Principal requesting withdrawal of the rustication orders as the students had tendered apology and his rustication was withdrawn vide Principal's letter No. NMC/70-71/2244/BYS dated the 27th August, 1970.

*Resolved that* the Principal's action in withdrawing the rustication orders be confirmed.

#### Section 'B'

17.      The Registrar reported the following orders of the Vice-Chancellor :

- (i) Orders dated the 8th January, 1971 sanctioning payment of an amount of Rs. 215.80 over and above the maximum ceiling of Rs. 1000/- to Shri T.N. Sharma, Senior Lecturer, Department of Political Science, Dungar College, Bikaner (who was Addl. Head Examiner in Political Science at the III Year T.D C. Examination, 1970) for assessing the additional answer-books sent to him by the University for expediting the declaration of results of 1970.
- (ii) With reference to Syndicate Resolution No. 17 dated 28-9-1971 orders dated 18-2-1970 in cancelling the present examination of the candidate (Shri Hafiz Mohammed Murtuza Khan bearing Roll No. 6249 for the II Year T.D.C. Arts examination, 1970) and further debarring him from appearing at any examination of the University to be held in 1971 for having resorted to the use of unfair means at the examination.
- (iii) Orders dated 18-2-1971 in approving the results of Final M.B.B.S. Practical Examination in Preventive & Social Medicine (held in February, 1971) conducted by one external and two internal examiners at R.N.T. Medical College, Udaipur instead of two external and two internal examiners, as the second external examiner could not come on account of sudden accident and the Principal failed to arrange for a substitute inspite of vigorous efforts.
- (iv) With reference to the Syndicate Resolution No. 16 dated 1st Feb., 1971 authorising the Vice-Chancellor to decide finally about the dates for the commencement of the 1971 Main Examinations of the University, orders in fixing the following dates for the commencement of the various examinations.

Sl.No.	Examinations	Date of commencement of Examinations.
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- |    |   |                           |
|----|---|---------------------------|
| 1. | M.A., M.Sc. (including Geology and Applied Geology), M.Com.. Second and Final Year T.D.C. (Arts, Science and Commerce), B.A., B.Sc. and B.Com. (Hons.) Parts I & II B.Sc. (Agr.) Parts II and III, J.D.C. (Part II) and Engineering (First to Final B.E.) Examinations.   | Monday,<br>April 5, 1971  |
| 2. | All Examinations of the Regional College of Education, Ajmer.   | Monday,<br>April 12, 1971 |
| 3. | Pre-University (Arts, Science & Commerce), Pre-Professional (Ag ) Ist Year T.D.C. (Arts, Science & Commerce), B.Sc. (Agr.) Part I, B.Sc. (Nursing) Part IV, Pre-Ayurved, Sanskrit (Shastri, Acharya and Shiksha Shastri, B.Lib.Sc.. Diploma in Adult Education, Diploma in Cost and Works Accountancy and Master of Business Administration examinations. | Monday,<br>April 19, 1971 |
| 4. | LL.B., LL.M. Diploma Examinations in the Faculty of Law, B.Ed. and M.Ed. examinations.  | Monday<br>April 26, 1971  |

In this connection the Registrar further reported consequent upon the schedule of examinations having been delayed this year on account of the ensuing election to the Lok Sabha and Census operations in the State, the Vice-Chancellor passed orders to the effect that the University may close for the summer vacations w.e.f. 17th May, 1971 (instead of 7th May) and re-open for the session 1971-72 on 19th July, 1971 (instead of 7th July.)



*Resolved that* the aforesaid orders of the Vice-Chancellor be confirmed.

*(Academic Section)*

Section 'A'

18. The Syndicate appointed Dr. G.S. Sharma (Member Syndicate) to serve on the Finance Committee vice—Dr. R.C. Mehrotra for the residue of his term i.e. up to 12th January, 1972.

19. With reference to its Resolution No. 22 dated 14th December, 1970 amending O.66 of the University Hand Book Pt. II regarding minimum pay scales for teachers of affiliated colleges, the Syndicate considered letter No RUCTA/70-71/52 dated the 4th February, 1971 from the General Secretary, Rajasthan University & College Teachers Association conveying the sense of great dis-appointment felt by the RUCTA in regard to the revised pay scales and making certain suggestions in that behalf.

*Resolved that* the suggestion made by the RUCTA be referred to the same Committee (viz., Dr. Khanna Committee) on the recommendations of which the Syndicate had amended the Ordinance.

20. The Syndicate considered the recommendations of Academic Council made at its meeting held on the 13th & 15th February, 1971.

*Resolved that* the recommendations of the Academic Council be accepted with the following modifications/observations.

I. *Ref. Resolution No. 7 (ii) :*

In view of the information given to the Syndicate that as many as 73 candidates out of the total number of 155 had not applied for appearing at the examination of 1971, two more chances be given to

these candidates to appear in the failing compulsory subject(s) at the August 1971 and April, 1972 examinations according to the syllabus of 1966 or 1967 edition, as the case may be, and they be informed right now that no further chance would be given to them.

(II) *Ref. Resolution No. (11)*

The Syndicate accepted the recommendation of the Council for the Boards of Studies, Faculties and the Academic Council, and *further resolved* that the same be also applied in the case of the membership of the Syndicate and other statutory bodies of the University.

(III) *Ref: Resolution no. 28 (ii) regarding eligibility to offer Dissertation in lieu of a paper.*

The recommendation be *referred* back to the Council with the observation that the implementation of the revised rule of securing at least 60% marks in the aggregate at the Previous examination of M.A./M.Sc./M.Com. be made applicable w.e.f. the admissions to be made to the Final class of the M.A./M.Sc./M.Com. in July, 1972 and on wards.

(IV) *Ref: Recommendation no. (29) :*

- (a) Consideration of recommendation regarding provision for private candidature be kept in abeyance pending decision on the introduction of the proposed alternative schemes of examination, namely, 'A', 'B', and 'C'.
- (b) The State Government be moved to modify Section 24-L of the University Act so as to permit academic autonomy to the Teaching Wing of the University as recommended by the Council.

(V) Ref: *Recommendation no. (40) :*

The recommendation be referred back to the Council with the observation that the amendment proposed to O.92 of the Univ. Hand Book Pt. II be made effective from the admissions to be made for the session 1971-1972.

21. With reference to the Academic Council Resolution No. 28 dated the 13th/15th February, 1971 referring the recommendations of the Examination Reforms Committee as modified by the Sub-Committee of the Academic Council with certain observations to the Faculties of Arts, Science, Commerce and Law, the Syndicate considered a letter No. Exam./Reforms/3260 dated the 17th Februrry, 1971 from Prof. Daya Krishna suggesting that (i) a meeting of the Principals be called to explain to them the reasons for implementations of the reforms accepted by the Academic Council and (ii) a joint emergency meeting of the Faculties of Arts, Science, Commerce and Law be called to consider the afore-said recommendations with regard to Examination reforms.

In this conuection the Syndicate noted that the afore-said proposal involved an estimated expenditure of about Rs. 40,000/-on payment of T.A. and D.A. to the members.

*Resolved thdt* the Vice-Chancellor might first invite some Principals of Government and non-Government affiliated colleges and discuss the recommendations with regard to examination reforms with them.

22. The Syndicate considered the following proposals of Prof. K.L. Varma, Member-Syndicate, as contained in his letter No. 10 dated the 2nd February, 1971 :

- (1) The Ordinances 376-F and 376F-1 of the Univ.Hand Book Pt. II be amended so as to read as follows:

*"O.376-F.* The date of compulsory retirement of a permanent whole-time servant of the University is day on which he/she attains the age of 62."

The reasons for the proposal are :

- (i) During the period of over 23 years ever since the inception of the University to the present day, there is not a single case to my knowledge where recommendation for extension for two years in the first instance beyond the age of supranuation i.e. 60 years has not been approved by the Syndicate. The existing Ordinance provides for an extension of not more than two years in the first instance after the date of compulsory retirement only in very special circumstances.' The spirit of the ordinance thus appears to have been long sight of. I nother words extensions have tended to become more or less a matter of routine
  - (ii) In a majority of cases the privilege of having such extensions will mostly be enjoyed by the 'higher ups' and not the 'lower down's in general.
  - (iii) Ends of justice and equity demand that extension by two years in the first instance should be enjoyed by one and all as has been the case with so many all these years as stated in (i) above.
- (2) *O.376F-1* : Excellent teachers of exceptional merit may be re-employed for a further period of three years i.e. upto the age of 65 years provided that such a teacher is physically quite fit and mentally quite alert.

Note : A special machinery for merit's will have to be laid evaluation of 'excellence' and' exceptional down by the University. It will be on the basis of this evaluation that re-employment will be given. The reasons for re-employment will be given in full details in writing.

- (3) Where-ever teachers of the right calibre and required standard are not found for the posts of Professors in certain subjects by the Selection Boards at the time of interviews it will be desirable to have with the help of as many experts on the panel of the University as possible the bio-data of Professors who may be willing to serve the University on a contract basis, the contract being renewable if necessary, on the performance of the Professor. The Selection of the Professor will then have to be made in the regular way.

If the above arrangement could be made during the period of temporary appointment of the Professor some of the candidates who had appeared for interviews and were found by experts or by the Selection Board to have a good measure of potentiality in them for the posts of Professors would have come upto the mark for selection as Professor on a permanent basis after the expiry of the period of temporary appointment. Students concerned also will not be losers.

- (4) To the rules for deputation of teachers to conferences the following rules be added where ever necessary.
- (i) Financial liability on the part of the University for deputation of a teacher/an-employee of the University to a conference should not exceed Rs. 2,000/-. The total liability for all such deputations shall be within the budgetary provision of the University. All such deputations will be governed by the frame work of rules in connection with the deputations to conferences.
  - (ii) Deputations to conference will be decided by a Committee appointed by the University and meeting twice a session for the purpose. All

such deputations will be dully reported to the Syndicate.

- (iii) Only such cases shall be referred to the Syndicate for consideration through the Finance Committee as are not covered by (i) above.

*Resolved that :*

- (I) *Ref: Propasals nos. (1) & (2) above :*

Consideration be postponed.

- (II) *Ref : Proposal no. (3) above :*

The question of tenure appointments of the teaching posts in the University be *referred* to the Committee appointed by the Academic Council vide its Resolution No. 33 dated 13/15th Feb. 1971 in connection with the proposal for instituting Honorary and Emeritus Professorships etc.

- (III) *Ref: Proposal no. (4) above :*

It be *referred* to the Committee appointed by the Vice-Chancellor to review the existing Rules for deputation of teachers to the various Conferences. The Committee be also asked to review the existing rules for providing travel grants to teachers for attending conferences abroad,

23. With reference to its Resolution No. 40 dated the 14th August, 1970 the Syndicate considered a further letter No. F. 17 (106) MPH/Gr. I dated the 1st February, 1971 from the Dy. Secretary to the Government, Medical & Public Health Department, Rajasthan, Jaipur requesting the University to review its earlier decision and grant exemption to Dr. U. M. Mathur from the minimum qualifications prescribed for the post of Professor in Skin & V.D. on the grounds

that—(i) the post against which Dr. Mathur was working as Professor would continue only upto 28.2.1971 and thereafter the same would be abolished, and (ii) the Government did not consider it desirable to revert Dr. Mathur at that stage especially when he would retire from service after 28.2.1971.

*Resolved that* the Medical Secretary be informed that the question of granting exemption for minimum qualifications in the case of Dr. U. M. Mathur did not arise now as according to the information given by the Government Dr. Mathur would have already retired.

24. The Registrar reported—(i) receipt of a letter No. 60/Oph/71 dated the 1st February, 1971 from Dr. B. N. Consul, Prof. & Head of the Department of Ophthalmology, S. M. S. Medical College, Jaipur informing the University that the All India Ophthalmological Society at its scientific session and Conference awarded an 'Adenwalla Oration' and a gold medal to him on 23rd January, 1971 as a token of honour on his Oration on the topic—'Why a cataract is formed?', and (ii) that a letter of congratulations had been sent to Dr. Consul on behalf of the Vice-Chancellor and the University for the academic distinction conferred on him.

*Resolved that* the report be recorded with the appreciation of the Syndicate.

25. The Vice-Chancellor informed the Syndicate that on a perusal of letter dated 16th February, 1971 written by Dr. K. Subramanyam, Joint Director, Botanical Survey of India to Shri Shiv Sharma, University Lecturer in Botany it was revealed that Dr. Subramanyam was very much impressed with the field knowledge of Shri Sharma and the efforts put in by Shri Sharma in organising a herbarium in the Department in a befitting manner.

*Resolved that* a letter of appreciation on behalf of the Syndicate be sent to Shri Shiv Sharma.

26. With reference to its Resolution No. 27 dated the 1st February, 1971 the Sydicate considered the following revised draft of S. 90-A and S.95 of the University Hand Book Pt. II :

S. 90 A :

1. At an annual meeting of the Senate a member  
*Questions :* may ask any question for the purpose of obtaining information from the Syndicate on a matter concerning the University.

*Dis-allo-* 2. The Syndicate may disallow a question on the  
*wance of* ground that it cannot be answered consistently  
*Questions.* with the interests of the University.

*Rules reg.* 3. No question shall be admitted unless it com-  
*Questions.* plies with the following conditions :

- (a) it shall not refer to a person by name nor contain a statement not strictly necessary to make the question intelligible;
- (b) it shall not contain arguments, inferences, ironical expressions or defamatory statements. A member asking a question shall make himself responsible for the accuracy of his statement and its implications;
- (c) it shall not ask for an expression of opinion or the solution of an abstract legal question or of a hypothetical propositions;
- (d) it shall not refer to the character or conduct or competence of any person, except in his official capacity in the University.

*Notice of* 4. Any member who intends to ask a question  
*Questions.* shall forward to the Registrar a notice in writing to that effect, together with a copy of the question to be asked, *so as to reach him not later than thirtyfirst* day of the month of January preceding the annual meeting of the Senate.



No member can ask more than five questions and no question shall refer to more than one subject.

*Admissibility of Questions.* 5. After the last date of receipt of questions, the Syndicate shall consider the admissibility or otherwise of the questions and the answers that should be given there to.

*Disallowance of Questions & Syndicate's decision.* 6. (a) The Syndicate shall decide on the admissibility of a question and shall disallow any question which in its opinion contravenes the provisions of this Statute, notifying to the person concerned the ground on which the question was disallowed.

(b) The Syndicate may disallow, at its discretion :

(i) any question which involves the preparation of elaborate statements or statistics, and

(ii) any question the answer to which involves an excessive amount of time and labour.

(c) The decision of the Syndicate shall be final and no discussion thereon shall be permitted at any meeting of the Senate.

*Answers to Questions.* 7. Questions which have been admitted and the answers thereto shall be printed or typed and circulated to the members of the Senate along with the agenda papers but they shall not form part and parcel of the minutes of the meeting.

*Answering of Questions at Meetings.* 8. The Chairman shall call out the name of each questioner in the order in which the names are printed, specifying the serial number of his question, and make a sufficient pause to give him or any other member a reasonable oppor-

tunity of rising in his place, and putting a supplementary question. Supplementary questions must be put immediately after the principal question to which they relate.

- |  |  |
|--|--|
| <i>Time-limit.</i>                           | 9. The time-limit for answering questions shall not exceed half an hour.   |
| <i>Supplementary Questions</i>               | 10. Any member may put a supplementary question for the purpose of further elucidating any matter of fact, regarding which an answer has been given, provided that the Chairman may disallow any supplementary question, if in his opinion it infringes the Statutes. The decision of the Chairman shall be final and no discussion shall be permitted at any meeting of the Senate. |
| <i>Answering of Supplementary Questions:</i> | 11. Supplementary questions shall be answered by members nominated by the Syndicate for the purpose.   |

The Chairman may decline to allow a supplementary question being put without notice, and the member nominated to answer any supplementary question may decline to answer it without notice, in which case the supplementary question may be put by the questioner only in the form of fresh question at the next annual meeting of the Senate.

- |                                    |   |
|------------------------------------|---|
| <i>No discussion on Questions.</i> | 12. No discussion shall be permitted in respect of any question or of any answer given to a question. |
|------------------------------------|---|

S. 95 :

Only decisions, not speeches, shall be printed in the records provided that :

- (i) if in the course of a discussion involving important decisions, contrary points of view have been well made, such points of view may, at the discretion of the Chairman, broadly be mentioned in order to place on record that the final decision taken was not oblivious of those contrary points of view, and
- (ii) such observations on the annual report, the annual accounts and the financial estimates, as are accepted by a majority of the members present for communicating the same to the Syndicate shall also be recorded.

*Resolved that the aforesaid draft Statutes be approved for consideration of the Senate with the modification that clause(12) of the proposed S. 90-A be deleted*

27. The Syndicate considered adopting the following Hindi equivalents of the terms—‘Chancellor’ and ‘Vice-Chancellor’ as printed in the consolidated Glossary of Administrative Terms, published by the Commission for Scientific and Technical Terminology, Ministry of Education, Government of India, New Delhi :

Chancellor : कुलाधिपति

Vice-Chancellor : कुलपति

*Resolved that since several other universities such as Banaras and Allahabad were reported to have adopted these terms, the same be adopted for use in the University as well.*

28. The Syndicate considered a letter No. F. 82-1/70 (SA Unit) dated the 17th February, 1971 from the Secretary, University Grants Commission, New Delhi proposing establishment of three ‘Study Centres’—one each at Jaipur, Ajmer and Kota.

*Resolved that (i) the aforesaid proposal be accepted in principle, (ii) the State Government be requested for undertaking the financial liability after the Fourth Plan Period and (iii) the following Committee be appointed to examine the proposal in all its pros and cons and suggest a detailed scheme for its acceptance and implementation :*

- (1) Principal, Government College, Ajmer
- (2) Principal, Government College, Kota
- (3) Principal, Agarwal College, Jaipur
- (4) Registrar
- (5) Director of Libraries of the University (Convener)

29. With reference to its Resolution No. 3 dated 1st February, 1971 to the effect that the State Government be moved to re-consider the question of the age of superannuation of teachers in the affiliated colleges and raise the same to 60 years so as to be in keeping with the general trend in the country, the Registrar reported that before a reference could be made to the Government a letter No. F. 1(164) Edu/C/6/68 dated the 18th February, 1971 was received from the Education Secretary, Rajasthan requesting the University to lower down the superannuation age of teachers of affiliated colleges from 60 years to 58 years as prescribed in the grant-in-aid rules of the Education Department.

*Resolved that* the aforesaid Resolution (No. 3 dated the 1st February, 1971) of the Syndicate should stand and the same be brought to the notice of the State Government.

30. The Syndicate considered a proposal of the Head of the Department of Accountancy & Business Statistics, University School of Commerce, Jaipur as contained in his letter No. 954 D dated 22.2.1971 for providing a grant of Rs. 3,000/- for holding a Summer School in Accountancy & Business Statistics for college teachers for a period of 15 days during May, 1971.

*Resolved that* a sum of Rs. 2,000/- only be sanctioned for organising the proposed summer school in Accountancy & Business Statistics.

31. With reference to Syndicate Resolution No. 29 dated the 28th September, 1970 authorising the Vice-Chancellor appoint an Inspection Committee for the inspection of Dungar College, Bikaner for fresh affiliation of LL.M. standard

and to take further necessary action on the Inspection Report, the Registrar reported that—(i) the Vice-Chancellor vide his orders dated the 2nd February, 1971 granted provisional affiliation to the college for the aforesaid standard for a period of one year i.e. LL.M. Part I Examination of 1972 and Part II examination 1973 subject to fulfilment of the conditions of affiliation recommended by the Inspection Committee, (ii) the conditions of affiliation were communicated to the Director of Education Rajasthan, Jaipur with the remarks that as suggested by the Inspection Committee the college would be inspected during the month of September/October every year for the next five years and the expenses incurred on the inspection would have to be borne by the Directorate of College Education.

In this connection the Syndicate considered letter No. F.4(8) Accts/DCE/68-71/137 dated the 2nd March, 1971 from the Director of Education, Rajasthan to the effect that (a) the Directorate had no objection for yearly inspections for five years though in its opinion the same would be too frequent and (b) the Directorate would not be able to bear the expenditure on such inspections as it would not be possible to get the same admitted in audit.

*Resolved that* (i) the aforesaid orders of the Vice-Chancellor be confirmed and (ii) the next inspection of the college for LL.M. classes be arranged when application for permanent affiliation was received.

*(Accounts and Finance Section)*

#### SECTION 'A'

32. The Syndicate considered the recommendations made by the Finance Committee at its meeting held on 13th January, 1971 (*vide Appendix-II*).

*Resolved that* the aforesaid recommendations of the Finance Committee be approved.

33. With reference to its Resolution No. 30 dated 14.12. 1970 under which the request of Shri C.B. Gena, University Lecturer in Political Science, Jaipur for granting him conveyance advance in relaxation of Rule No. 15 of the 'Rules for sanction of Conveyance Advance' was not acceded to, the Syndicate considered a further letter from Shri Gena for favourable consideration of his request on the following grounds :

(a) His basic pay had been raised from Rs- 600/-to Rs.640/ p.m.(as against the minimum of Rs.700/-p.m. required under the Conveyance Advance Rules).

(b) As per medical advice, he could not use a cycle or scooter or motor cycle whereas he was required to perform duties at two places, namely, Maharani's College Campus and the University Department of Political Science.

Resolved that the request of Shri Gena be acceded to as a special case and accordingly, he be granted conveyance advance as per rules.

34. The Syndicate considered a proposal of Dr.G.C. Patni Prof. & Head of the University Department of Mathematics for granting the benefit of contribution of Provident Fund of Shri Vimal Chandra working as a whole-time Upper Division Clerk in the study Group set up under his Directorship with the assistance of the National Council of Educational Research and Training, New Delhi.

*Resolved that the aforesaid request be not acceded to as the same was not covered under the P.F. Rule of the University.*

35. The Syndicate considered a request dated the 20th January, 1971 from Shri S.K. Jain, University Lecturer in Statistics, recommended by the Dean, University Studies in Arts for relaxing the limit of Rs. 500/—prescribed under Rule 16(iii) of the Rajasthan University Medical Aid Rules, 1970'

and allow full medical reimbursement of the expenditure incurred on treatment of his wife who had got severely burnt on 15.9.1970.

*Resolved that the request of Shri Jain be not acceded to.*

36. The Syndicate considered a request of Mrs. Jasbir Jain, University Lecturer in English for sanctioning a conveyance advance of R . 12,000/—for the purchase of a car in relaxation of the condition of minimum basic pay of Rs.700/-p.m. as contained in Rule No. 15 of the 'Rule for section of Conveyance Advance', her basic pay being Rs. 680/-p.m.

*Resolved that the request of Mrs. Jain be acceded to in view of her imperative need and re-paying capacity.*

37 The Syndicate considered a request of Shri K.G.K. Menon, Manager, Ford Foundation Scheme, University Department of Zoology for allowing full reimbursement of the medical bill for the treatment of his wife amounting to Rs. 726.65 in relaxation of the condition contained in Rule No. 16(iii) of the 'Rajasthan Medical Aid Rules, 1970'.

*Resolved that the aforesaid request of Shri Menon be not acceded to.*

38. The Syndicate considered the recommendations of the Finance Committee made at its meeting held on 27th February, 1971 (*vide Appendix-III*).

*Resolved that the aforesaid recommendations of the Finance Committee be accepted with the modification that in Resolution No. 4 (iii) the last sentence beginning with the word—'Accordingly' and ending with the words—'shown in budget' be deleted.*

39. The Registrar reported that—(i) Mrs. Sudha Pande, wife of Prof.G.C. Pande was suddenly taken ill when she was in Delhi in May/June, 1970, (ii) she received treatment from Dr. M.M. Singh, M.Sc., M.D. (Harvard), F.A.C.P., F.C.C.P.

{U.S.A ), (iii) Prof. Pande preferred the relative medical reimbursement claim for Rs. 283.75 (iv) this claim was admitted for Rs. 267.73 (75% of the amount claimed) and accordingly payment was made to Prof. Pande, and (v) the payment so made was approved by the Vice-Chancellor vide his orders dated 12.1.1971 in consideration of the undermentioned facts :

- (1) Treatment had been received from a fully qualified and competent physician (who happens to be Honorary Physician to the President of India), and
- (2) In view of the above fact, the case fully merited a relaxation in the rule to the effect that treatment by an Authorised Medical Attendant of the University only is reimbursible.

*Resolved that the aforesaid orders of the Vice-Chancellor be confirmed.*

#### SECTION 'B'

40. The Syndicate confirmed the orders of the Vice-Chancellor to the effect that since the Chief Proctor was holding the post in an honorary capacity and the work done by him in the interest of the University was beyond measure, the ceiling of free telephone calls laid down by the Syndicate vide Resolution No. 4 dated 11 April, 1970 be not made applicable to him.

The meeting ended with a vote of thanks to the Chair.

Sd/-  
Vice-Chancellor

Sd/-  
Registrar



## APPENDIX I

(Ref :—Res. No. 6 of Syndicate dated 10th March, 1971).

Minutes of the meeting of the Selection Committee held on Friday the 26th February, 1971 in the Syndicate Hall of the University Central Office for the selection of a Lecturer in French.

The following were present :—

- |                            |                   |
|----------------------------|-------------------|
| 1. Dr. P.L. Bhatnagar,     | Chairman.         |
| Vice-Chancellor            |                   |
| 2. Dr. G.C. Pandey,        | Dean, Faculty     |
| Prof. and Head of the      | of Arts.          |
| Department of History      |                   |
| and Indian Culture,        |                   |
| University of Rajasthan,   |                   |
| Jaipur.                    |                   |
| 3. Dr. K.C. Khanna,        | Member, Syndicate |
| Simla.                     |                   |
| 4. Prof. Y.K. Sohoni,      | )                 |
| Reader in French,          | )                 |
| Head of the Department of  | )                 |
| Modern European Languages, | ) Experts.        |
| Poona University, Poona    | )                 |
|                            | )                 |
| 5. Mr. H. Barthod.         | )                 |
| French Embassy,            | )                 |
| New Delhi.                 | )                 |

Out of the four candidates called for interview, the following three appeared before the Selection Committee :—

1. Shri Gokal Nath Banerjee, Hghly.
2. Shri Laxmi Kanta Das, Jaipur.
3. Miss Usha Jain, Poona.

The Committee also considered the applicatin of Miss. O.R. Cardoso in absentia.

Nobody was found suitable for the post of Lecturer in French.

Sd/-P.L. Bhatnagbr.  
Vice Chancellor.

## APPENDIX II

(Ref:—Res. No. 32 of Syndicate dated 10th March, 1971)

Minutes of the Finance Committee held on Wednesday, the 13th January, 1971, at 11.00 a.m. at the University Office, Jaipur.

### Present

1. Prof. P.L. Bhatnagar, Vice-Chancellor (*in the chair*)
2. Dr. R.C. Mehrotra
3. Dr. G.C. Pande
4. Shri S.C. Tela
5. Shri K.C. Bakiwala
6. Shri R.L. Mishra
7. Shri M.P. Mathur
8. Mrs. Rama Kochar

Shri L.P. Vaish, Offg. Registrar

Shri S.L. Ajmera, Dy. Registrar (A & F).

1. The minutes of the meeting of the Finance Committee held on the 20th June, 1970 were confirmed.

2. *Resolved to recommend that* the annual subscription of the University payable to the Association of Commonwealth Universities London be raised from £450 to £495 from the financial year 1970-71 and budget provision be made accordingly.

3. The Committee considered a proposal for creating the following posts on a permanent basis.

1. Aquatic Coach—one.
2. Volley ball Coach—one.

*Resolved to recommend that* the above posts be made permanent with effect from 1.4. 1971.

4. With reference to Res. No. 27 dated 15.1.1969 of the Academic Council (duly approved by the Syndicate vide its Res. No. 3 dt. 6.3.69) the Committee considered a proposal that the post of Demonstrator in the University Deptt. of Philosophy be upgraded to that of Lecturer w.e.f. the date the present incumbent leaves the post.

*Resolved to recommend that* the post be upgraded to that of lecturer with effect from the date the present incum-

bent leaves the post of Demonstrator and further that necessary provision be made for the post of lecturer when the occasion arises.

5. The Committee considered the proposal of the Legal Advisor to engage a clerk with background knowledge of Law Courts to assist him in the day to day disposal of work pertaining to the University on a fixed salary of Rs.150/-p.m.

*Resolved to recommend that the proposal be approved and the person so appointed be engaged on a purely temporary basis upto 31st March, 1971.*

6. With reference to Syndicates Res. No. 38(i) & (ii) dated 27th September, 1969, approving the University of Rajasthan New Pay Scales Rules, 1969, the Committee considered a proposal for making special provision for grant of advance increment to University employees who have put in continuous service of 12 years or more as on 31.3.1970 as has been done by the State Government vide letter No. F.9 (17) FD (Rules) /70 dated 20th October, 1970 and inserting a new Rule 12 in the Rajasthan University New Pay Scales Rules, 1969.

*Resolved to recommend that (i) the proposal be approved and special provision for grant of advance increment be made applicable in the case of non-teaching staff only who are governed by the Rajasthan New Pay Scales Rules, 1969 (ii) the benefit of this provision be also allowed to such of the members of the non-teaching staff who were in Govt. service prior to the taking over of four local Govt. colleges in July, 1962 and were finally absorbed in the University and (iii) the following be inserted as Rule 12 in the Rajasthan University New Pay Scales Rules, 1969.*

"12. Special provision for grant of advance increment to the University servants who have put in continuous service of 12 years or more as on 31.3.1970.

(1) A University employee who has put in continuous service of 12 years or more as on 31.3.1970 and is drawing pay below Rs. 1,500/- p.m. in the New Pay Scales or in the existing pay scale as defined in Rule 6(i) of these Rules shall be granted one advance increment with effect from 1 4 1970.

Provided that the advance increment shall not be admissible to—

- (i) A University servant who has already received advance increment under Rule 11(ii) of these Rules.
- (ii) A University servant who has been benefitted by Rs. 100/- or more at a time due to fixation of pay on account of promotion or appointment from a post in a lower pay scale to a post in a higher pay scale during the period between 1.4.1958 to 31.3.1970.
- (iii) To a University servant, drawing a fixed rate of pay instead of pay in the New Pay Scale for not possessing the prescribed qualification, till he qualifies and starts drawing pay in the New Pay Scales.

2. The grant of advance increment under sub-Rule (1) will not effect the normal date of increment.

7. *Resolved that the following recommendation of the Senate made at its meeting held on 21.3.1970 be examined by a Committee consisting of (i) Dr. R.C. Mehrotra, Convener, (ii) Dr. G.C. Pande, (iii) Dr. Om Prakash, (iv) Shri R.L. Misra, and (v) Shri S.L. Ajmera, Member-Secretary :—*

‘कला व विज्ञान अध्ययन के स्नातकीय कक्षाओं तथा कामर्स कालेज के बजट विभागानुसार बनाने के बारे में विचार किया जाना चाहिए।’

8. With reference to Syndicate Resolution No. 20 dated 28.9.1970, the Committee considered a proposal to sanction abolition of the posts mentioned at (a) and creation of new posts mentioned at (b) below involving financial implications as shown against each.

(a) *Abolition of posts :*

- |                      |     |        |                   |
|----------------------|-----|--------|-------------------|
| (i) Asstt. Registrar | one | Saving | Rs. 7,300.00 p.a. |
| (ii) Section Officer | one | „      | Rs. 6,100.00 p.a. |

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Total Savings      Rs. 13,400.00

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(b) *New Additional posts :*

(i) Assistants	six	Add 1. Expd.	Rs. 33,000.00 p.a.
(ii) U.D.Cs.	five	,,	Rs. 22,500.00 p.a.
(iii) L.D.Cs.	two	,,	Rs. 6,600.00 p.a.

---

Total	Rs. 62,100.00 p.a.
(—)	Rs. 13,400.00 p.a.

---

Net excess expenditure involved. Rs. 48,700.00 p.a.

*Resolved to recommend that* the above proposal be approved subject to the concurrence of the State Govt. and further that in the light of the letter No. F. 3(20)/Edu/Cell-III/70 dated the 16th June, 1970 received from the State Government fixing Non-Plan Maintenance grant on block basis, the State Government be requested that in view of the fact that this University is an affiliating University and every year the number of students and examinations are constantly increasing, the University be permitted to create additional non-teaching posts under the Non-Plan budget out of the surpluses from examination fees over and above actual surplus which accrued upto 31st March, 1969 from examination receipts in relaxation of condition No. 2(2) of the Government letter referred to above and the University be allowed to utilise these surpluses at its discretion.

9. With reference to Finance Committee Res. No.11 (i) dated the 20th June, 1970 recommending that the proposal made at a meeting of the Chief Warden and Resident Wardens of the University Hostels under the Chairmanship of the Vice-Chancellor to the effect that a special pay @ Rs. 10/- p.m. each be granted to the cooks in the Hostels in view of the arduous nature of duties performed by them and extra hours of work they are required to put in, be not accepted to report that (i) in view of the recommendations of the aforesaid committee, special pay has actually been paid to the cooks (ii) it has to be stopped now which has resulted in hardships to the employees concerned, the Committee *reconsidered* the recommendation made in this behalf earlier as noted above. There are at present 22 sanctioned posts of cooks. The extra expenditure involved would thus come to Rs. 220/- p.m. or Rs. 2,640/- p.a.

*Resolved to recommend that* in view of the fact that the cooks are required to work for about 12 hours a day as well as on holidays including sundays, hard duty allowance at the

rate of Rs. 10/- p.m. to each cook be paid with effect from 1.4.1970 subject to the following conditions :—

- (i) Hard duty allowance will not count for P.F. and gratuity benefits, City Compensatory allowance, House Rent allowance, D.A.,
- (ii) The Warden concerned shall give a certificate on the salary bill every month that the cook for whom the allowance has been claimed has actually performed hard duties during the month.
- (iii) This allowance would be admissible only for 10 months, namely, from 1st July to 30th April, every year.

10. That Dy. Registrar (Accounts & Finance) reported that a total sum of Rs. 31,241. 15 p as per details given in Annexure I hereto, was outstanding in the book of the University as unadjusted advances against the erstwhile Research Unit in parapsychology. The reason for these outstanding advances are :

- (i) No budget provision for meeting the expenditure on the Unit was made through the Budget for 1969—70; and
- (ii) Advances paid to the Unit in years preceding 1969-70 which remained unadjusted on March 31, 1969 also could not be adjusted because of the fact stated at (i) above and further because the relative accounts, though forwarded by the Unit, had not been routed through the Administrative Head of the Unit, the Head of the Deptt. of Philosophy, and, therefore, the accounts and bills received in this office from the Unit direct were returned to the Unit for resubmission through the Head of the Department of Philosophy. But these accounts and bills were never received back in this office and now these are not traceable.

In view of the above stated facts, the Committee considered the office suggestion that to realise the matter the total sum of Rs. 31, 241. 15 of unadjusted advances be adjusted as expenditure actually incurred and for this purpose a lump sum provision of Rs. 31. 241. 15 be made through R. E. 1970-71 in the Budget of the Dean, University Studies in Arts-Department of Philosophy.

*Resolved to recommend that* (i) advances for which vouchers are available be finally adjusted, (ii) such advances for which there are no vouchers but the expenditure could be verified from records, the same be adjusted after recording a certificate from the Registrar that the advances outstanding have been utilised for the Purpose for which they were paid, (iii) those advances for which no action could be taken as per (i) and (ii) above, be shown as outstanding and (v) necessary provision for adjusting advances be made through R. E. 1970-71 in the budget of the Dean, University Studies in Arts-Department of Philosophy.

11. The Committee considered the office proposal that the provision under the Head "Medical Aid to Staff" be increased through R. E. 1970-71 from Rs. 1, 25, 000.00 to Rs. 2, 000, 00. 00.

*Resolved that* (i) the above proposal be approved, (ii) in view of the Syndicate resolution No. 45 dated 16th may, 1970, a committee comprising of the following be constituted to review the entire medical aid scheme :

- |                         |                   |
|-------------------------|-------------------|
| (i) Dr. Narayan,        | Convener          |
| (ii) Dr. G. C. Pande,   |                   |
| (iii) Shri R. L. Misra, |                   |
| (iv) Dr. S. D. Mishra,  |                   |
| (v) Shri S. L. Ajmera,  | Member-Secretary. |

12. *Resolved to recommend that* the office proposal to realise water charges from the occupants of the University quarters and buildings as per Government pattern be postponed.

13. The Dy. Registrar (Accounts & Finance) reported that according to practice obtaining in this behalf the University Engineer charges 5% ad valorem on all materials issued out of his stores-irrespective of whether the materials issued are for (a) major work entrusted to a contractor; (b) minor work being done through a contractor or departmentally; and (c) maintenance jobs.

The total income accruing as a result of the above has been so far adjusted through the annual Balance sheet out of the total expenditure on University Engineer's office, and the residual expenditure was ear-marked for building/work-wise allocation for purposes of capitalisation. Now that original works have been almost reduced to nil it is no longer possible to allocate the expenditure work-wise, the Committee considered the office proposal that income estimated to

accrue in a financial year by way of 5% storage and handling charges should be accounted for as the income of the U. E. s office and this income should be duly indicated in the U.E. s Budget; and (b) the total expenditure incurred in a financial year on the office of the University Engineer including pay and allowances should be adjusted through the Balance-sheet by contra credit to the Fund Account.

*Resolved to recommend that the practice obtaining in the Government be adopted with effect from 1. 4. 1971.*

Sd -P. L. Bhatnagar  
Vice-Chancellor.

Sd;-L. P. Vaish

Sd;-S. L. Ajmera  
Registrar. Dy. Registrar (A&F)



## APPENDIX III

(Ref: Res. no 38 of Syndicate dated 10th March, 1971)

Minutes of the meeting of the Finance Committee held on Saturday, the 27th February, 1971 at 11.00 a.m. in University, Office, Jaipur.

**Present**

Prof. P.L. Bhatnagar, Vice Chancellor  
(in the chair)

2. Dr. G.C. Pande
3. Shri K.C. Bakiwala
4. Shri R.L. Mishra
5. Shri S.C. Tela
6. Mrs. Rama Kochar

Shri L.P. Vaish, Offg. Registrar

Shri S.L. Ajmera, Dy. Registrar (A&F).

(N.B. Shri M.P. Mathur could not attend the meeting )

1. The minutes of the meeting of the Finance Committee held on the 13th January, 1971 were confirmed.

2. The Committee considered the Balance Sheet as on 31st March, 1970 and the relevant Income and Expenditure account for the year 1969-70 together with the audit report and the replies given by the office to the objections of the Auditors.

*Resolved to recommend that the Balance-sheet together with the Audit Report and the replies given there to by the office be approved with the following amendments/Observations:*

- (i) In the reply given to Audit observation No. 10 (a) on page 3 of the Audit Report the following addition be made :

“The Central Office, however, gets the annual physical verification report from the various units every year and the inventories of the articles mentioned by Audit are maintained by these units.”

- (ii) that the position in respect of adjustment of old outstanding advances is still not satisfactory though the position is better as compared to the previous years.
- (iii) that the office should make energetic efforts to fully adjust or make necessary recoveries where needed to wipe out old outstanding advances, and further the office should also avoid in future, misclassification of receipts as reported by the Auditors.

3. *Resolved to recommend* that M/S Kalani & Co., Chartered Accountants be appointed on the existing terms and conditions as Auditors for auditing the University accounts for the year 1970-71 during the year 1971-72 in terms of Statute 22 (2).

4. The Committee considered the Revised Estimates for the year 1970-71 and the Budget Estimates of the University for the year 1971-72 together with the budget note containing General Remarks.

*Resolved to recommend* that the Budget Estimates 1971-72 and Revised Estimates 1970-71 and the General Remarks as prepared by the office be approved with the following observations:—

- (i) the Budget Estimates 1971-72 reflect an actual deficit of Rs. 4.05 lacs which has been attempted to be adjusted by showing probable savings to that extent. But according to the conditions attached to the Block grant by the State Government, the University cannot have a deficit Non-Plan budget. It is, therefore, necessary that provisions for expenditure under the Non-Plan budget are reduced to the extent of Rs. 4.05 lacs to fully balance the budget.
- (ii) the surpluses for the year 1970-71 be invested suitably.
- (iii) the existing paragraphs No. 13 and 16 of the General Remarks of the budget to read as follows :—  
 “13. The State Government vide its order No. F.1 (68) FD (Rules)/70 dated the 24th February, 1971 has sanctioned adhoc relief at the rate of Rs. 10/-p.m. to employees drawing pay below Rs. 110/-p.m. Rs. 110/- and above but upto Rs. 1,250/-p.m., at the

rate of Rs. 15/-p.m., and above Rs. 1250/- amount by which pay falls short of Rs. 1265/- with effect from 1st January, 1971. It is proposed to sanction adhoc relief to the University employees of the corresponding categories on the same terms and conditions as notified by the State Govt. subject to its approval. The financial liability for the months of January and February, 1971 would be to the tune of Rs. 50,000.00 and for the financial year 1971-72 of the order of Rs. 2,95,000.00. The State Government is being requested to sanction an additional grant for this purpose. Provision for this additional expenditure shall be made through Revised Estimates 1971-72."

\*16 During the session 1970-71, some additional teaching posts were temporarily given in the various teaching units against the over-all vacancies of Lecturers available in various departments. In the budget for 1971-72 the number of posts in the various departments remains the same as shown in the budget for 1970-71. The actual filling up of vacant teaching posts of Lecturers for the academic year 1971-72 under the various departments will be sanctioned on the basis of the actual teaching workload, and additional temporary appointments, if and where required, will be made against over-all vacancies available. However, if any additional post, above the level of the total number of sanctioned posts, is required the same will be created after obtaining prior approval of the state Government. Accordingly necessary changes have been made in the sanctioned strength of the lecturers shown in the budget."

(iv) Further typographical errors or errors of additions/ subtractions wherever occurring be corrected.

Notes : In the light of the above suggestions of the Finance Committee the following changes have been made to balance the Non-Plan budget estimates for 1971-72 :

(i) The total provision of Rs. 1,71,000.00 on account of purchase of scientific, equipment, appliances, furniture etc. etc. made under various units has been transferred to be met out of the Replacement Fund. Corresponding reductions have

been made under the Non-Plan budget and provision for the same has been shown under the Debt Heads-Replacement Fund.

- (ii) keeping in view the rate of increase in the number of examinees from year to year the estimates of receipts for examination fees has been raised by a total sum of Rs. 1,23,797.00.
- (iii) A sum of Rs. 12.00 lacs out of the surplus of Rs. 27.11 has been earmarked laer, which is to accrue at the end of 1970-71 for transfer to the Reserve Fund. This amount will be invested in approved securities, and the estimated interest of Rs. 90,000.00 has been included in the receipts for 1971-72.
- (iv) Provision for expenditure on the under-mentioned heads has been reduced as under in view of the actuals:
 

(a) University Central Office	
Pay of Estt.	Rs. 10,000.00
(b) University publications	Rs. 2,000.00
	Rs. 12,000.00
- (v) Provision of Rs. 7,915.00 for new posts of the Homco clinic has been transferred from Non-Plan New items of Expenditure to State Plan New Items of Expenditure.

The above adjustments fully cover the deficit of Rs. 4.05 lacs shown in the budget proposals placed before the Finance Committee as under :

Deficit shown earlier	Rs. 4.05 lacs.
Deduct in arrears in income—	
(a) Exam. Fees.	Rs. 1.24
(b) Interest	Rs. 0.90
	Rs. 2.14
(—)	Rs. 1.91

Amount adjusted by deduction in expenditure—

(a) By transfer to Replacement Fund Rs. 1.71

(b) By reduction on pay etc. Rs. 0.12

(c) By transfer of an item from Non-Plan to New item of Expenditure Plan Rs. 0.08

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Rs 1.91

5. The Committee considered the New Items of Expenditure for the various Departments/Schools/Colleges/Offices for the year 1971-72.

*Resolved to recommend* that the new items of expenditure as proposed by the office be approved with the modification that—

- (i) provision for the post of Homeopath and literate peon in the Homeopathic clinic of the University be transferred from the Non-Plan New Items of Expenditure to the State Plan-New Items of Expenditure, and further that the qualifications and pay and scale of Homeopath be prescribed with the approval of the State Govt.
- (ii) lumpsum provision for the building works be reduced from Rs. 1,65,219.00 to Rs. 1,57,304.00 and that the building works beyond the limit of Rs. 1,57,304/-if required to be taken up in response to the needs felt, the expenditure on such item be made out of the surpluses for the year 1970-71;
- (iii) proposals for New Items of Expenditure Non-Plan be approved with the remark that the post of Asstt. Registrar for the new branch of Secrecy Section be created temporarily for one year as an experimental measure, and the position be reviewed in 1972-73 on the basis of experience gained during the year.

Note :

While discussing new items of expenditure Prof. G.C. Pande, Dean, University Studies in Arts suggested that (i) University may take up with the U.G.C. the question of starting post-graduate

classes in Music, and (ii) feasibility of providing alternative accommodation to the non-teaching Departments which are presently located in the Humanities and Social Sciences buildings be explored because of shortage of space for class room in these buildings.

6. *Resolved to recommend that the following be incorporated as sub-rule No. (viii) under Rule 5 of the Rajasthan University House Rent Rules 1970 and further to re-number the existing sub-rule No. (viii) as sub-rule No (ix),*

“Not withstanding the provisions of sub-rule (ix) above, a University employee who is sole owner or is a joint owner of an ancestral house shall be entitled to get House Rent Allowance if he actually lives in a rented accommodation and satisfies in the opinion of the Vice-Chancellor any of the following conditions—

(a) Where the University employee is sole owner and no portion of the house is on rent, that the accommodation is inadequate for the use of the employee, considering the size of his family and his status.

(b) Where the University employee is a joint owner and the house is divided into portions for each joint owner, that no part of the portion in his share is on rent and the accommodation is inadequate for the use of the employee considering the size of his family and his status.

(c) Where the University employee is a joint owner and living as a member of the joint family, without the house being actually divided into portions, that the accommodation available for the use of his family is inadequate considering their need and his status.

*Further resolved to recommend that the following new certificate as certificate No. (5) under Rule 10 of the Rajasthan University House Rent Allowance Rules, 1970 be adopted :—*

“I am sole owner/joint owner of an ancestral house, no portion of which has been let out on rent and that accommodation in my possession or available for my use, the details of which are given below, is not adequate accordingly to my status and size of the family.”

7. *Resolved to recommend that a sum of Rs. 7.00 lacs be transferred from the Reserve Fund of the University amo-*

unting to Rs. 22.45 lacs to the General Fund of the University for the purpose of construction of 12 quarters for Class IV staff, 8 quarters for Ministerial staff, 4 quarters for Administrative Officers and 12 quarters for Lecturers in the University Campus.

8. *Resolved to recommend* that the word 'First' occurring in line 3 of the existing Statute 41-11 (ii) be substituted by the word 'Second' so that the Statute be read as follows:—

"Recoveries towards the amount advanced shall be made in monthly instalments not exceeding thirty as may be decided by the Syndicate commencing at the *second* payment of a full month's salary after the advance is granted but no recovery shall be made from a subscriber when he is on leave or otherwise than on full pay."

9. *Resolved to recommend* that the University of Rajasthan Work Charged Employees Service Rules 1971 as prepared by the office be approved for adoption. (Draft rules enclosed).

10. In pursuance of the Government of Rajasthan Finance Department (Rules) Notification No. 1 (68) FD/ (Rules) 70 dated the 24th February, 1971 regarding sanction of adhoc relief to the State Government employees at the rates mentioned below with retrospective effect from 1st January, 1971.

Pay	Amount of adhoc relief per month.
Below Rs 110/-	Rs. 10/-
Rs. 110/- and above but upto Rs. 1,250/-	Rs. 15/-
Above Rs. 1,250/-	Amount by which pay falls short of Rs. 1,265.00

The Committee considered an Office proposal that the above said relief may be allowed to the employees of the University on the terms and conditions prescribed by the State Government for the relief, provided that the State Government agrees to reimburse the amount of additional expenditure on this account to the University.

Financial liability for the above would be as under :

(a) For 2 months viz. January & February, 1971.

(i) in respect of 724 employees drawing upto Rs. 109/-	Rs. 14,480.00
(ii) in respect of 1147 employees of the other category	Rs. 34,410.00
	<hr/> Rs. 48,890.00

(b) For the finance year 1971-72

(i) in respect of 724 employees drawing pay upto Rs. 109/-p.m.	Rs. 86,880.00
(ii) in respect of 1147 employees of the other category	Rs. 2,06,460.00
	<hr/> Rs. 2,93,340.00

*Resolved to recommend* that the University employees be granted adhoc relief at the scale and in accordance with the terms and conditions attached thereto by the State Govt. in this behalf vide Govt. of Rajasthan Finance Department (Rules) Notification No. F. (68)FD/Rules/70 dated the 24th February, 1971 provided that the State Govt. agrees to reimburse the University the amount of additional expenditure involved. -

11. The Committee considered an office proposal that Rule No. 3 (a) of the Rules for House building advances be amended to raise the limit of house building loan to University employees from Rs. 20,000/- to Rs. 25,000/- in view of the increase in cost of construction on account of rise in the wage level and rise in the prices of building materials.

*Resolved to recommend* that the limit of Rs. 20,000.00 be raised to Rs. 25,000.00 under Rule No. 3 (a).

Sd/-P.L. Bhatnagar      Sd/-L.P. Vaish      Sd/-S.L. Ajmera  
Vice-Chancellor      Offg. Registrar      Dy. Registrar (A&F)



MINUTES OF THE MEETING OF THE FACULTY OF  
COMMERCE HELD ON 15TH MARCH, 1971 AT  
12.00 NOON AND ON 16TH MARCH, 1971 AT  
10.00 A.M., IN THE HUMANITIES BUILD-  
ING, UNIVERSITY CAMPUS, JAIPUR.

**Present**

Dr. Om Prakash, Dean—In the Chair on 15.3.1971

Dr. R.G. Sarien —Elected to the Chair on  
16.3.1971, the Dean be-  
ing not present as he had  
left headquarters the  
previous night for his  
journey to America.

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|---------------------------|--------------------------------|
| 3. Dr. K.S. Mathur        | 4. Dr. M.L. Mishra             |
| 5. Shri Mohan Lal Sharma  | 6. Shri Madan Lal Sharma       |
| 7. Dr. N.K. Sharma        | 8. Shri G.L. Joshi             |
| 9. Shri K.N. Gupta        | 10. Shri J.P. Gupta            |
| 11. Shri C.S. Kulsrestha  | 12. Shri M.L. Sharma           |
| 13. Dr. P.S. Sood         | 14. Shri J.R. Kumbhat          |
| 15. Shri H.L. Jain        | 16. Shri R.K. Mathur           |
| 17. Shri P.L. Chaturvedi  | 18. Shri C.B. Shrivastava      |
| 19. Shri R.S. Vijai       | 20. Shri J.C. Ojha             |
| 21. Shri N.M. Kothari     | 22. Shri M.L. Jain             |
| 23. Shri G.L. Gupta       | 24. Shri B.L. Mathur           |
| 25. Shri R.K. Gupta       | 26. Shri P.K. Jain             |
| 27. Dr. D.S. Yadav        | 28. Shri R.C. Agarwal          |
| 29. Shri V.K. Jain        | 30. Shri Raj Pal Singh Chauhan |
| 31. Shri D.S. Mathur      | 32. Shri B.L. Gupta            |
| 33. Shri H.S. Khandelwal  | 34. Shri K.N. Sharma           |
| 35. Shri B.S. Shrivastava | 36. Shri R.P. Dusad            |

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|-------------------------------|---------------------------|
| 37. Shri R.P. Sharma          | 38. Shri S.C. Jain        |
| 39. Shri J.C. Jain            | 40. Shri S.R. Singhvi     |
| 41. Shri R.C. Patni           | 42. Shri R.C. Gupta       |
| 43. Shri M.L. Agarwal         | 44. Shri N.L. Garg        |
| 45. Shri P.C. Agarwal         | 46. Shri D.D. Bhargava    |
| 47. Shri N.K. Maheshwari      | 48. Shri H.S. Pareek      |
| 49. Shri H.P. Maheshwari      | 50. Shri S.N. Sharma      |
| 51. Shri R.S. Agarwal         | 52. Shri S.S. Shukla      |
| 53. Shri P.N. Mathur          | 54. Shri R.N. Goyal       |
| 55. Shri K.C. Jain            | 56. Shri M.K. Sharma      |
| 57. Shri K.M. Bansal          | 58. Shri M.M. Gupta       |
| 59. Shri S.D. Bahuguna        | 60. Dr. Mali Ram          |
| 61. Shri S.R. Sharma          | 62. Shri D.P. Gupta       |
| 63. Shri G.D. Bohra           | 64. Shri P.L. Pande       |
| 65. Shri M.L. Verma           | 66. Shri G.N. Sharma      |
| 67. Shri P.N. Gupta           | 68. Shri M.L.H. Shah      |
| 69. Shri R.N. Sharma          | 70. Shri T.C. Sharma      |
| 71. Shri R.N. Thakur          | 72. Shri I.M. Khicha      |
| 73. Shri A.R. Totla           | 74. Shri N.K. Jain        |
| 75. Shri Vidya Dhar Sharma    | 76. Shri P.M. Kanoongo    |
| 77. Shri P.L. Bhargava        | 78. Shri N.K. Kulshrestha |
| 79. Shri Mool Singh Shekhawat |                           |

N.B. : Member at serial Nos. 1, 2, 36, 57 and 79 did not attend the meeting on 16th March, 1971; the rest attended on both the days.

Before proceeding with the business on the agenda Dr. K.S. Mathur on behalf on the Faculty and on his own behalf (i) offered congratulations to Dr. R.G. Sarien on his appointment to the post of Professor (Business Administration) in the University School of Commerce, and Shri M.L. Agarwal Principal, Agarwal College, Jaipur on his election as a mem-

ber of the Syndicate and (ii) wished a bon voyage to Dr. Om Prakash who was due to leave for a short visit to U.S.A. for attending the 18th International meeting of the Institute of Management Science in Washington, and visiting certain universities.

1. The minutes of the special meeting of the Faculty of Commerce held on 18,19th August, 1970 were taken up for confirmation.

In this connection the Faculty considered the comments of Shri N.M. Kothari, Principal M.L.V. Govt. College, Bhilwara as contained in his letter No. nil dated 11th November, 1970.

*Resolved that* the minutes be confirmed with the following modifications, observations :

- (I) In the list of members present, Shri M.K. Sharma at Sm.no. 58 be shown as present on both the days viz., 18th and 19th August, 1970.
- (II) In Resolution No. 2 the designation of Shri P.L. Bhargava be corrected as "Associate Post-graduate Head."
- (III) Part (ii) of Resolution No. 5 be read as under :
  - “(ii) the observation contained in para 2(ii) of the minutes to the effect that the prescribed norm of instruction, even when there are 2 or more Papers in a particular subject/group, should be six periods of 45 minutes duration in each paper, be endorsed.”
- (IV) Part (iv) of Resolution No. 5 beginning with the words-‘ the suggestions of the committee regarding, the scheme of M.Com. examination’ and ending with the words-‘ appertaining to that Board’ be *deleted*.

(V) In Resolution No. 6 substitute the words—' strongly felt' for the word—' observed.

2. The Faculty considered a note from Dr. M.L. Mishra, Offg. Director, University Institute of Correspondence Studies, Jaipur on the implications and precautions for implementing fundamental changes in the courses for students of the University of Rajasthan (*Vide Appendix I*).

*Resolved that* the change of name of the Department of Applied Economics & Finance as accepted by the Faculty vide its Res. No.(7) dated 18th/19th August, 1970 viz., Department of Economic Administration and Financial Management should continue.

*Resolved further that* the three Boards of Studies in the Faculty be asked to recommend courses of study for the M.Com. and B.Com. (Hons.) degrees in their respective subjects and while doing so due consideration is shown to interdisciplinary approach between the three Departments.

3. The Faculty considered the recommendation of the Board of Studies in English as contained in its Resolution No.8 dated 23rd October, 1970 to the effect that an additional optional paper in English be introduced in the Faculty of Science and Commerce also with effect from the Second and Final Year T.D.C. examinations of 1972 and 1973 respectively.

*Resolved to recommend that* (i) the aforesaid recommendation of the Board of Studies in English be accepted for the Faculty of Commerce and (ii) consequently the following new O.242-C be introduced in this behalf :

“O.242-C : In addition to the optional subjects prescribed for the Second and the Final Year T.D.C. Examinations, a candidate may, as his option, offer an ‘Additional Paper’ in General English each at the Second Year and the Final Year Examinations subject to the following conditions :

(1) Only those candidates will be allowed to offer this additional optional paper at the Second Year Exa-

- mination who have already cleared the compulsory Paper on General English prescribed for the First Year T.D.C. Examination either at the Main or at the immediately following supplementary examination.
- (2) Only those candidates will be allowed to offer the additional optional paper in General English at the Final Year T.D.C. Examination who have already cleared the additional optional paper in General English prescribed for the Second Year T.D.C. Examination either at the Main or at the immediately following supplementary examination.
- (3) Candidates who fail to clear the additional optional Paper in General English at the Final Year T.D.C. (Main) Examination shall be given one chance only to clear the same at the immediately following supplementary examination.
- (4) An entry of having passed the additional optional paper in General English will be made in the Degree of such candidates as have cleared both the additional optional papers viz., the one prescribed for the Second Year T.D.C. and the other for the Final Year T.D.C. Examination.
- (5) Candidates offering the additional optional paper will be required to put in the same minimum attendance as is prescribed for other subjects of the Second Year and Final Year T.D.C. Examinations.
- (6) The pass percentage in the additional optional paper will also be the same as prescribed for other subjects.

Note : The result of the additional optional paper in General English will not in any way affect the result of a candidate for the Second Year and/or the Final Year T.D.C. Commence."

4. With reference to the Academic Council Resolution No. 14 dated 21.4.1970 accepting the recommendation of a Committee appointed by the Vice-Chancellor under the convenership of Dr. Satish Chandra for examining the recommendations made by a Committee appointed by the U.G.C. to visit the non-professional affiliated colleges, the Faculty considered for further necessary action the recommendation of the aforesaid Committees to the effect that the University courses should be reorganised to make them more functional.

*Resolved that* the aforesaid recommendation be recorded as steps were already being taken by the Faculty to make the courses more functional.

5. The Faculty considered letter dated the 29th January, 1971 from Principal N.M. Kothari suggesting for review of the provision made in O.248 of the University Hand Book Pt. II last year making a candidate eligible for admission to the Previous examination for the degree of Master of Commerce in Applied Economics and Banking & Finance groups (Now named as Economic Administration and Financial Management groups).

*Resolved to recommend* that candidates passing their B.A. or B.Sc. examination be deemed eligible for admission to M.Com. course in the aforesaid groups provided they obtain at least 45% marks in the aggregate *and* at least 48% marks in the subject of Economics/Commerce Business Administration at the B.A. or B.Sc. examination.

*Resolved further to recommend* that the Second para of O.248 of the University Hand Book Pt. II in this behalf be amended so as to read as follows :

*O.248 :*

A candidate who after taking his B.A./B.Sc. degree of the University or of any other University recognised for the purpose by the Syndicate and obtaining at least 45% marks in the aggregate *and* at least 48% marks in the subject of Economics/Commerce/Business Administration has completed a regular course of study in an

affiliated college for one academical year shall also be deemed eligible for admission to the Previous Examination for the degree of Master of Commerce in (i) Economic Administration and (ii) Financial Management Groups."

6. With reference to the Academic Council Resolution No. 28 dated the 13th February, 1971 the Faculty considered the final suggestions of the Examination Reforms Committee appointed by the Vice-Chancellor, together with the observations of the Academic Council there on as contained in its Resolution cited above.

*Resolved to recommend* that (i) the three alternative schemes of examinations viz., 'A', 'B' and 'C' be approved in principle and (ii) alternative scheme 'B' which is at present contemplated for Post graduate and Honours courses only, be also made applicable for the B. Com. Pass Course examination.

7. The Faculty considered the following proposal of Shri J. C. Ojha, Head of the Department of Business Administration, M.L.V. Government College, Bhilwara as contained in his letter dated 28th Feb., 1971 :

"Resolved that the courses of study for B. Com. Honours as given in O.245 be revised by the respective Boards of Studies with a view to bring perfect coordination in the courses prescribed for B. Com. (Hons.) Pass and M. Com. Examinations."

*Resolved that* the aforesaid proposal be referred to the three Boards of Studies in the Faculty for consideration and necessary action.

8. The Faculty considered a proposal made by Shri P.L. Chaturvedi in the meeting to the effect that the Associate Post-graduate Heads in the affiliated colleges be also treated as ex-officio members of the Faculty.

*Resolved to recommend* that the aforesaid proposal be accepted and the State Government be requested to make a

provision to that effect in the University Act.

9. The Faculty considered a proposal made in the meeting by Shri Mohan Lal Sharma to the effect that members of the Faculty be treated as at par with Post-graduate Heads/ Degree Heads in the concerned Colleges for all practical purposes including work-load.

*Resolved to recommend* that the aforesaid proposal be accepted.

10. The Faculty considered a proposal made in the meeting by Shri M. L. Agarwal to the effect that conveyance allowance at the usual rate be paid to the local members of the Faculty when they attend The University meetings.

*Resolved to recommend* that the aforesaid proposal be accepted.

11. The Faculty considered a letter dated the 22nd January, 1971 addressed to the Vice Chancellor by the President of the Institute of Chartered Accountants of India requesting to allow the Chartered Accountants, admission to research fellowships of the University.

*Resolved that* a Committee consisting of the following members be appointed to examine the aforesaid proposal and report :

- (1) Dean, Faculty of Commerce (Chairman)
- (2) Conveners of the 3 Boards of Studies in the Faculty.
- (3) Dr- K. S Mathur, and
- (4) Principal M. L. Agarwal

12 The Faculty considered the recommendations made by the following Boards of Studies at their meetings held in September/November, 1970 regarding the courses of study and Text-books, together with the additions and/or alterations in the Ordinances where-ever necessary for the various examinations in the Faculty viz., M. Com. (Previous) Examination of 1972 and M. Com. (Final) of 1973; Diploma in



Cost and Works Accountancy Examination Part I of 1972. Part II of 1973 and Part III of 1974; M.B.A. Examination of 1972; Diploma in Cooperation Examination of 1972; Diploma in Banking & Finance Examination of 1972; Pre-University Commerce Examination of 1972; B. Com. (Pass) First Year Examination of 1972, Second Year Examination of 1973 and Final Year Examination of 1974; B. Com. Honours Examination of 1974; Certificate/Diploma Course Examination in Stone-Typing (English/Hindi) 1972-1973 as contained in their Resolutions noted against each :

<i>Name of the Board</i>	<i>Res. No.</i>	<i>Vide Appendix</i>
(1) Accountancy and Bus. Statistics.	5	II
(2) Economic Administration and Financial Management.	5	III
(3) Business Administration	5 & 6	IV

In this connection the Faculty also considered the suggestions of (i) the Principal, Lohia College, Churu as contained in his letter No. LC/1970-71/6303 dated 24.9.1970, (ii) the Principal, Shri Kalyan College, Sikar as contained in his letter No. 2363/SK/70 dated 24.9.1970, (iii) the Principal, M. S. J. College, Bharatpur as contained in his letter No. F.-3/1838 dated 26.2.1970, (iv) Shri N. K. Maheshwari, Head of the Department of Accountancy & Bus. Statistics, S.S.G. Pareek College, Jaipur as contained in his letter dated 28.9.1970 and (v) Shri H. C. Rara, University Lecturer in Accountancy and Business Statistics as contained in his letter dated 23rd Feb, 1971.

*Resolved to recommend* that the aforesaid recommendations of the Boards of Studies be accepted with the following modifications/observations :

- (I) *Ref. Appendix-II to the minutes of the Board of Studies in Accountancy & Statistics : -*

(a) In the paper of Accountancy & Statistics

(Financial Accounting) for the First Year Examination, topic No. 8—' Investment Accounts be *deleted*.

(b) The syllabus for Paper I of Financial and Cost Accounting prescribed for the Second Year Examination be re-written so as to read as follows; and the books recommended be the same as suggested by the Board :

Paper I—*Financial and cost Accounting*

Group A (1) Company accounts :

Accounting for shares and debentures (Issue, redemption and forfeiture) : acquisition. of business, Profits prior to incorporation, underwriting, final accounts, Previsions, Reserves, Sinking Fund, Disposal of Profits, Bonus shares.

(2) Departmental and Branch accounts including foreign Branch.

Group B—*Cost Accounting* :

Definition, Objects and advantages of costing; elements of cost; recording and pricing of materials issued; treatment and allocation of wages; chargeable expences over-head charges inside and outside the factory; basis of apportionment, allocation and absorption of overheads; Machine Hour Rate; various methods of costing; Unit or out-put costing.

Note : Candidates will be required to answer at least two questions from each Group.

(c) In Paper II—'Statistical Methods' prescribed for the Second Year Examination, topic No. 10' Indian Statistics: An elemintary knowledge of the Statistical Organisation of India' be *deleted*.

- (d) The existing nomenclature of the paper under Elective Subjects for the Second Year Examination be changed from—‘Quantitative Methods’ to ‘Paper I—‘Quantitative Methods and their Application’ and the syllabus for this paper be as given vide Appendix—V
- (e) The following changes be made in the syllabus of paper I—Taxation Law and Accounts prescribed for the Third Year Examination:
- (i) Topic No. 7 under Group ‘A’ be read as—  
‘Assessment of individuals and firms.’
  - (ii) Topic No. 8 under Group ‘A’ read as—‘Assessment Procedure, Collection and recovery of tax; appeal and revision, refunds.
  - (iii) Substitute—‘Group ‘B’ for Section ‘B’.
  - (iv) Topic No. 5 under Group ‘B’ be read as “Sales Tax authorities, appeals and revision.”
  - (v) Substitute ‘commodities’ for ‘committees. (in the existing Note and the same be numbered as Note No. (1).
  - (vi) Add Note No. (2) so as to read as—“Changes in Taxation laws made after 31st August in the academic year will not be required to be studied by the candidates”.
  - (vii) Add note No. (3) so as to read as—‘A candidate will be required to attempt at Least 3 questions from Group ‘A’ and one from Group ‘B’.
- (f) The nomenclature of the Paper under the Elective Subject for the Third Year Examination be changed from ‘Costing’ to ‘Paper II—Costing’ and the following changes be made in Syllabus of this paper:
- (i) In topic No. 7 the word—‘systems’ be replaced by the word—‘method’.

(ii) Topic No. 7 viz., Costing of by-products and joint products be deleted and the rest be re-numbered accordingly.

(iii) The last topic viz., cost Audit be deleted.

(II) *Ref. Appendix to the minutes of the Board of Studies in Economic Administration and Financial Management :*

(a) *First Year Examination—Indian Economy :*

The syllabus of Section 'A'—Economic Geography of India be the same as prescribed for the 1971 examination with the change that topic No. 4 page 11 of the 1970 edition of the syllabus) be read as—"4. Irrigation; main sources; main River Valley Projects (Bhakra, D.V.C. and Tungbhadra).

The syllabus of Section (B' viz., Elements of Indian Economy be the same as for 'Economic Horizons in India'(vide pages 11 & 12 of the 1970 edition of the syllabus) with the following changes :

(i) Topic No. 2 be read as—"12 Population Problem Physical and Occupational distribution and causes of high rate of grow population planning."

(ii) Topic No. 5 be read as—"5 Commercial and Industrial Centres (Kanpur, Ahmedabad, Bangalore, Kota, Hapur and Delhi) and ports."

(iii) Topic No. 6 be read as—"6. Transport: Importance and present position of Land, Air and Water Transport."

(iv) Add the Note at the end so as to read as—"Historical aspect of the study should be avoided."

- (b) The syllabus for the Paper—'Indian Economic Administration' prescribed for the First Year Examination be read as follows, and the Convener be authorised to send list of books recommended for this paper, for consideration of the Academic Council :

*Indian Economic Administration*

Meaning, nature and importance of economic administration.

Economic aspects of Indian constitution (An elementary study of provisions relating to taxation and budgeting).

Concept of planning. Planning machinery and its functions.

State in relation to national economy (regulation, administration and promotion of agriculture and industry in India).

Role of Public Sector (Forms of organisation of Public enterprises in India).

- (c) The following changes be made in paper I—Principles of Economics prescribed for the Second Year Examination :

(i) Topic No. 1 under Section 'A' be read as—"I. Introduction, Scope (Macro, Micro), Methods, Laws and significance of Economics."

(ii) In topic No. 5 under Section 'B' the word—'Natural' be replaced by the word—'National'.

- (d) The nomenclature of Paper II prescribed for the Second Year Examination be changed from Money and Banking' to 'Money, Banking & Public Finance' and the syllabus for the same be written as follows :

*"Paper II—Money, Banking & Public Finance.*

Candidates will be required to attempt at least one question from each Group :

*Group 'A'*

- Money.*
- (a) Evolution, nature and functions of money. The role of money. An various economic systems. Classification of money.
  - (b) Value of money. The Quantity Theory, Fisher, Cambridge and Keynesian equations.
  - (c) Inflation and Deflation; their effects on economic growth.
  - (d) Index Numbers; their importance.
  - (e) Paper Money; Principles and methods of note issue. Present currency system of India.
  - (f) Monetary Standards; evolution, growth, downfall and present position of gold standard.

*Group 'B'*

- Banking :*
- (a) Types of banks.
  - (b) Indian Banking system: R.B.I., S.B.I. and other commercial banks.
  - (c) Study of recent trends in India.

*Group 'C'*

- Public Finance:*
- (d) Public and Private trends, Principles of Maximum Social Advantage, canons of Taxation and expenditure. and incidence and effects of taxation."
  - (e) The Convener be authorised to recommend books for Paper I—Planning & Economic Development prescribed for the Third Year Examination, for consideration of the Academic Council.
  - (f) The paper on 'Law & Practice of Banking (optional) recommended by the Board for second year T. D. C. examination be prescribed for the Third Year T. D. C. Examination.

- (g) The paper on 'Theory & Practice of Cooperation' recommended by the Board for the Third Year T.D.C. Examination be prescribed for the Second Year T.D.C. examination and the nomenclature of the Paper be read as "Law & Practice of Cooperation."
  - (h) The Note given under the syllabus of the Paper 'Theory and Practice of Cooperation' to the effect that same books be added for 1972 examination of Second Year T.D.C. be deleted.
  - (i) The scheme of examination and courses of study recommended by the Board for M Com. examination be referred back to the Board for re-consideration in the light of the observation of the Faculty as contained in its fore-going Resolution No. 2 of these minutes, and in the mean while the existing courses be repeated.
  - (j) As the Board did not suggested any changes in the scheme and courses of study for the B.Com. (Hons.) Examination, the existing courses be repeated.
- (III) Ref : Appendix-I to the minutes of the Board of Studies in Business Admn.

The nomenclature of the paper prescribed for the First Year T.D.C. examination be changed as Business Organisation and the following changes in the syllabus recommended by the Board be made :—

- (i) Topic No. 5 be read as—"5 Types of business combinations—Main Characteristics only.
- (ii) Topic No. 8 viz., Organisation and State regulation of Import and Export trade, be deleted.
- (iii) As the Board did not recommend syllabus for the Papers of 'Industrial Psychology' and 'In-

ustrial Sociology' prescribed for the First Year T.D.C. examination, the Convener be authorised to draft the same and place direct before the Academic Council for consideration.

(IV) *Ref : Appendix II to the minutes of the Board of Studies in Business Administration :*

- (a) The nomenclature of the Paper-Business Law' prescribed for the second Year T.D.C. Examination be read as—"Paper II-Business Law" and the heading "labour problems' together with 12 topics given there under be deleted.
- (b) Add 'Paper I' before the title of the paper—'Business Communication & Salesmanship'; put 40 marks, 20 marks and 40 marks against Section 'A', Section 'B' and Section 'C' respectively under this paper.

A note be given under this paper to the effect that candidates shall be required to attempt at least two question from Section 'A' two from Section 'C' and one from Section 'B'.

N.B. The Convener be authorised to recommend books for this paper for consideration of the Academic Council.

(V) *Ref : Appendix-III to the minutes of the Board of Studies in Business Admn. :*

- (a) For Paper I—"Company Law and Secretarial Practice prescribed for the Third Year T.D.C. examination a note be given to the effect that a candidate shall be required to attempt at least two questions from each of the sections 'A' and 'B'. The syllabus for Section 'A'—Company Law be re-written so as to read as follows :

'Definition of company; kinds of a company; private company—its privileges and



concessions; promotion; incorporation and commencement of business of a company; memorandum of Association; articles of Association and their alteration, prospectus including statement in lieu of prospectus and offer for sale. Doctrines of Ultravires and Indoôr management; allotment of shares; member-ship of company; share capital; types of shares and rights attached there to; Directors; managing director and Manager; investigation: prevention of oppression and mismanagement; winding up different modes.'

N.B. : The Convener be authorised to recommend books for this paper for consideration of the Academic Council.

- (b) In paper II—Elements of Management prescribed for the Third Year T.D.C. examination, add the word—'Brief' before 'Historical' background' in topic No. 2; and delete the words—'Brief study' in topic No. 3—Functions of management.

(VI) Ref : Appendix—IV to the minutes of the Board of Studies in Business Admn. :

- (a) The Scheme of M.Com. examination and the syllabus recommended for the papers of 'Principles of Management' and (Personal Management' be referred back to the Board for reconsideration in the light of the observations of the Faculty as contained in the fore-going Resolution No. 2 of these minutes; and in the mean while the existing courses of study for the M.Com. Previous/Final examination be repeated with the modification that topic No. 7

beginning with the words—‘An elementary study’ and ending with words—‘state enterprises occurring in paper I Principles of Management be deleted (vide page 2 of the 1970 edition of the syllabus).

- (b) The syllabus given under the heading ‘labour legislation and Social Security’ be treated for paper I—‘Labour Legislation’ of the subject ‘Labour & Industrial Relations’ prescribed for the Second Year Exam.
- (c) The syllabus given under the heading—‘Industrial Relations’ be treated for Paper II—Industrial Relations of the Subject—‘Labour and Industrial Relations’ prescribed for the Third Year Examination.
- (d) The Convener be authorised to recommend books for the paper viz, ‘Labour Legislation’ and ‘Industrial Relations’ for consideration of the Academic Council.
- (e) The existing syllabus for the subject of stenotyping prescribed for the T.D.C. examination be repeated. The Faculty recommended that teaching in Steno-typing should be started right from the first year and three periods for short-hand and three for type-writing per week be provided even though there will be no examination at the end of the first year, *and this be mentioned in the syllabus.*

(VII) Ref : *Appendix-V to the minutes of the Board of Studies in Business Admn. :*

- (a) The examination for M.B.A....be conducted according to the existing pattern until the alternative schemes ‘A’ and ‘B’ are finally accepted.

- (b) The syllabus recommended by the Board be approved with the following changes:

“Under paper V—‘Production Management & Quantitative Techniques’ put A with in brackets before the words ‘Production function.....’, and delete ‘quantitative Techniques’ occurring after ‘Buffy E.S.: Modern Production Management’, Put B within brackets before Basic Mathematics; delete Part I I occurring just above the heading ‘Quantitative Techniques’ on page 2 B of the cyclostyled minutes; and put C within brackets before the words ‘Quantitative Techniques.’

13. The Faculty clarified that (i) all the papers in the revised scheme for the B.Com. examinations shall be of 3 hours duration and carry 100 marks each and (ii) the earlier recommendation of the Faculty made vide its Res. No. 5 (iii) dt. 18-8-1970 in regard to reserving 10% marks for Internal Assessment shall remain in abeyance pending final acceptance of the alternative schemes of examinations as recommended by the Examination Reforms Committee.

14. The existing scheme of examination for the B.Com. Pass courses degree be replaced by the following revised scheme according to which the course of study to be introduced w.e.f. July, 1971 have been recommended by the Faculty.

B.Com. (Pass) Examination

(Three Year Degree Course)

First Year T.D.C. Examination

*Compulsory Subjects :*

Each subject will have one paper of 3 hours duration and carry 100 marks, the minimum pass marks in each subject being 36.

1. General English
2. General Hindi
3. Any one of the following:
  - (i) Mathematics
  - (ii) Industrial Psychology
  - (iii) Industrial Sociology
  - (iv) Indian Economic Administration
  - (v) History of Indian Civilisation & Culture.
  - (vi) Book-keeping—only for those who did not offer commerce at the qualifying examination.
4. Accountancy and Business Statistics  
(Financial Accounting)
5. Economic Administration & Financial Management  
(Indian Economy)
6. Business Administration  
(Business Organisation)

#### Second Year T.D.C. Examination

#### *Compulsory Subjects :*

Each subject will have two papers and each paper will be of 3 hours duration and carry 100 marks, the minimum pass marks in each subject being 72.

1. Accountancy and Statistics  
 Paper I : Financial & Cost Accounting.  
 Paper II : Statistical Methods
2. *Economic Administration & Financial Management*  
 Paper I : Principles of Economics  
 Paper II : Money, Banking & Public Finance.
3. *Business Administration.*  
 Paper I : Business Communication & Salesmanship  
 Paper II : Business Law

*Optional Subjects :*

Each subject will have one paper of 3 hours duration and carry 100 marks; minimum pass marks in each subject being 36.

The candidates will be required to offer any one of the following subjects :—

*1. Costing and Quantitative Methods*

Paper I : Quantitative Methods & their application.

*2. Labour and Industrial Relations*

Paper I : Labour Legislation

*3. Banking and Cooperation*

Paper I : Law and Practice of Cooperation

*4. Steno-typing*

Paper I : Type-writing (Hindi/English)

Third Year T.D.C. Examination

*Compulsory Subjects :*

Each Subject will have two papers and each paper will be of 3 hours duration and carry 100 marks, the minimum pass marks in each subject being 72.

*1. Accountancy and Statistics*

Paper I : Taxation Law and Accounts

Paper II : Auditing

*2. Economic Administration & Financial Management*

Paper I : Planning and Economic Development

Paper II : Elements of International Finance

*3. Business Administration :*

Paper I : Company Law & Secretarial Practice

Paper II : Elements of Management.

*Optional Subjects :*

Each subject will have one paper of 3 hours duration and carry 100 marks, minimum pass marks in each subject being 36 :

The candidates will be required to offer any one of the following subjects :—

1. *Costing and Quantitative Methods :*

Paper II—Costing

2. *Labour and Industrial Relations*

Paper II : Industrial Relations.

3. *Banking and Cooperation*

Paper II : Law and Practical of Banking

4. *Steno-typing*

Paper II : Short hand (Hindi/English)

15. The Faculty authorised the convener to recommend more books wherever considered necessary for consideration of the Academic Council.

The meeting ended at 2.15 p.m. with a vote of thanks to the chair.

Sd/-R.G. Sarien  
Chairman

## APPENDIX II

*(Ref:—Reso. No. 12 dated 15-3-71 of faculty of Commerce)*

Minutes of the meeting of the Board of Studies in Accountancy and Business Statistics held on 28th September, 1970 at 12.00 noon at the University Humanities Hall, Jaipur.

### Present :

1. Dr. D. S. Yadav
2. Shri H. L. Jain
3. Shri R. P. Dusad
4. Shri N. M. Kothari
5. Shri Bishambhar Sahai
6. Dr. L. S. Porwal

(1) Under Section 24 E (8) of the University of Rajasthan Act, convener of the Board of Studies from among its internal members was to be appointed.

Before this item was taken up, Dr. Bishambhar Sahai was requested to preside over the meeting.

Shri N. M. Kothari, Principal, Shri M. L. V. Government College, Bhilwara, was unanimously elected convener.

(2) Under Section 34 (4) (iv) of the University Act, Shri H. L. Jain was unanimously elected to serve on the committee for the selection of examiners in the subject for the year 1971.

(3) The reports of the examiners and the question paper set for the examination of 1970 were gone through. Complaints received from principals of affiliated Colleges and Head of the Department of Accountancy and Statistics, University of Rajasthan, against question papers of Accountancy & Statistics (Financial Accountancy) of II Year T. D. C. Advanced Business Statistics of II Year T. D. C. and Mathematics of Diploma in Cost & Works Accountancy Part II were also considered by the Board along with the remarks of the paper setter.

As regards question papers for which there were no complaints, the Board made observation about Accountancy & Statistics paper II (Income Tax & Auditing) for Final Year Examination (1967 Revised Scheme). It was the general view that the question paper was not balanced since in Income Tax Section about 50% question were set from one topic only and the Board suggested that the attention of the paper setter should be drawn to this matter.

The Board also desired that the syllabus of Income Tax Section should be more precisely defined.

The Board then took up complaints about question papers. As regards Financial Accountancy paper (Accountancy & statistics) of II Year, it was found that there were discrepancies in figures in English and Hindi version in questions 1, 5 & 6 and that the paper setter had issued instructions to treat answers correct whether figures in English or Hindi version had been taken and that no examinee was penalised due to difference in figures in the two versions. In view of this, the Board felt that no action was called for on this complaint; but observed that some method should be devised to see that such errors do not occur in future.

As regards complaint about Advanced Business Statistics (Optional) paper for II Year T. D. C. Examination, the Board felt that there is substance in the complaints and made the following observations—Questions 1 & 10 were very lengthy which cannot be attempted in normal duration; question 2 (a) was unnatural and incorrect also, question 3 was out of course; in question 4 (a) there was difference in figures for year 1955 in English and Hindi version further as there was no cycle, the examiner ought to have given the period of moving average for calculating trend value to solve the question. In question 6 (b) in the regression equation symbols  $x$  and  $y$  have been wrongly used in small letters instead of Capital letters. In question 8 the examiner has not made clear as to what he meant by the terms groups and series for which salient characteristics were needed.

The Board felt that in view of the above observations, necessary action as deemed fit should be taken against the paper setter of this paper and desired that some device should be found to ensure that such mistake do not recur in future.

As regards complaint about Mathematics paper of Diploma in Cost and Works Accountancy part II Examination the Board desired that the paper setter be instructed to set more questions on application than on derivation.



(4) The statements of qualifications and teaching experience etc. of teachers (received from the University) teaching wing, affiliated Colleges and other Universities) were considered and it was decided that the work relating to preparing panel of examiners for Department of Accountancy and Statistics for 1971 Examinations be completed by Shri H. L. Jain and Shri R. P. Dusad, members of the Board.

(5) The Board considered the question of recommending courses of study and Tax Books in Accountancy and Business Statistics and resolved to recommend courses of studies and text books for the various examinations of the Commerce Faculty as follows :

1. Pre University Examination of 1972 Examination.

(i) Book-keeping changes as suggested vide appendix I.

(ii) Mathematics—No change.

- |  |   |                                     |
|--|---|-------------------------------------|
| (2) B. Com. (Pass) First Year Examination of 1972    | ) |                                     |
|  | ) |                                     |
| (3) B. Com (Pass) Second Year Examination of 1973    | ) | Courses Suggested                   |
|  | ) | Vide                                |
| (4) B. Com. (Pass) Third Year Examination of 1974.   | ) | Appendix II                         |
| (5) B. Com. (Hons.) Examination of 1974.             |   | No change                           |
| (6) M. Com. (Prev.) Examination of 1972.             |   | No change (except in Paper VII Cost |
|  |   | Accountancy as in Appendix-II)      |
| (7) M. Com. (Final) Examination of 1973.             |   | No change (except in paper VII Cost |
|  |   | Accountancy as in Appendix II)      |
| (8) Diploma in Cost & Works Accountancy Examination. |   |                                     |

Paper I	1972	)
		)
Paper II	1973	)
Paper III	1974	)

No change.

Names of books are given in the appendix along with course.

(6) The Board considered the following suggestions of the Vice-Chancellor made by him in consultation with the Convener of the Examinations Reforms Committee :

- A. Regarding award of Sessional marks, these may be awarded on the basis of Articulation, comprehension and Objective Tests of the students as per details given below :

*Articulation*—4 marks

Each student may be required to write atleast one essay on the subject each term. This may be assessed by 2 independent teachers independently and marks recorded. Marks may be declared publicly and if any student feels aggrieved he may be explained why that particular award given.

*Comprehension*—marks

A test may be conducted each term to examine whether the students have picked up the appropriate expression, and have understood the subject matter.

*Objective Test*—3 marks

Under this category marking may be done but the marks may not be shown to the candidate. But the solution may be written by the teacher and posted on the notice board so that the students may know the correct answers. If this rational basis is adopted there is a change of increasing the quantum of internal assesment.

- B. As regards syllabus at the Post-graduate level I suggest that—

- (i) a list of full and half courses may be prepared according to the availability of teaching competence.
- (ii) it may be possible for a student to offer two full courses as a topic to give specialisation in that topic. Such a student would prepare himself for research in this topic.

(iii) a student who wishes to learn the subject for becoming a teacher, he may offer 4 half courses covering a variety of topics to have an extensive view of the subject. In fact the students may have to Choose one full and two half courses.

- C. For very few bright students it may be suggested that they may be encouraged to do some self-study on pre-assigned topics which are not included in their curriculum and they may be assessed entirely on that as far as sessional marks are concerned.

The Board agreed with the suggestion in principle but desired that the norms 'Articulation and Comprehension' should be made clear.

(7) It was reported that Academic Council, vide its Resolution No. 35 dated 21-4-1970 accepted the following draft-resolution prepared by Dr. Dayakrishna, Chairman, Examination Reforms Committee vide his letter No. Acad/c/1082 dated 17-4-1970 as a result of discussions in the meeting of the Examination Reforms Committee held on 17th April, 1970 :

"Resolved that in the interest of raising standards of teaching and examinations and award of degrees the Board of Studies may prepare alternative Schemes of courses and Examinations in their respective subjects to be implemented as early as possible.

The Board noted necessary action taken by the Academic Council on the draft resolution prepared by Dr. Daya Krishna about raising standard of teaching and examination.

With a vote of thanks to the chair, the meeting came to an end.

Sd,—N.M. Kothari

## APPENDIX I

*Pre—University Examination, 1971*

### BOOK KEEPING

There shall be one paper of three hours duration carrying 100 marks.

#### SYLLABUS

1. The Theory and Practice of Double Entry-Book-keeping and Accounts.
2. Principal and subsidiary books of Accounts-their uses, preparation and posting.
3. Bank Reconciliation Statement.
4. Cheques, Bills of Exchange and Promissory Notes.
5. Rectification of Errors.
6. Provision for Bad and Doubtful Debts and Discount.
7. Account Current and Average Due Date.
8. Preparation of Final Accounts with adjustments.
9. Consignment Accounts.
10. Depreciation—Nature and Methods of depreciation. Calculation of depreciation by Fixed Instalment Method, Diminishing Balance Method and Annuity Method
11. Elementary knowledge of Indian system of Accounts.

#### *Books Recommended :*

1. Elements of Book-keeping and Accounts by N. R. Sarkar.
2. Book-keeping and Accounts Parts I & II latest edition Jai Narain Vaish.
3. Book-keeping and Accounts ( Hindi version ) by R. R. Gupta.
4. Book-keeping and Accounts by C. B. Gupta.
5. Book-keeping for P. U. C. by Dau Dayal Bhargava.
6. Intermediate Book-keeping and Accountancy by Agarwal and Kumbhat (Hindi version).

## APPENDIX II

*I Year Examination, 1972.*

## COMPULSORY

## MATHEMATICS

There shall be one paper of 3 hours duration carrying 100 marks.

*(a) Coordinate Geometry*

Rectangular coordinates, Quadrants, Distance between two points. The section formula. Equations to Straight lines the slope form. the intercept form, passing through two points, general linear form. Relation between the slopes of two lines which are (i) parallel and (ii) perpendicular.

*(b) Trigonometry :*

Angles of any magnitude. Positive and negative angles. Definition of sexagesimal and circular units of angular measurement. Definition of six trigonometrical ratio and their inter-relations. Formulae for ratios of allied angles. Trigonometrical ratios of  $0^\circ$ ,  $30^\circ$ ,  $45^\circ$ ,  $60^\circ$ , and  $90^\circ$ . Addition and subtraction formulae for  $\sin 2A$ ,  $\cos 2A$  and  $\tan 2A$  Expression of a sum or difference of two sines or two cosines as a product and vice versa.

*(c) Algebra :*

Indices and laws of Indices (without proof). Arithmetic Geometric and Harmonical Progressions : Determination of  $n$ th term and the sum to  $n$  terms. Arithmetic, Geometric and Harmonic means of two positive numbers; Logarithms : Definition and laws regarding product, quotients, powers, and change of base. Use of Logarithm-tables. Simple Quadratic Equations. Binomial theorem for positive integral index (without proof), Partial Fractions (easy problems).

*(d) Commercial Arithmetic :*

Discount, Compound interest, Premium and Annuities. Ratio, Proportion and Partnership.

N. A. The Paper shall be divided into four sections. Candidates shall be required to attempt in all five questions and at least one question from each section.

*Books recommended :*

1. Inter Algebra : B. R. Gangwal and R. C. Gaur (Ramesh Book Depot, Jaipur).
2. Higher Algebra : Hall & Knight.
3. Plane Trigonometry : Part I & II, Loney.
4. Plane Trigonometry : Patni & Gupta.
5. Commercial Arithmetic : Solaria (Oxford)
6. Commercial Arithmetic : S. R. Mittal.
- 7, Elementary Mathematics—M. C. Gupta, Ramesh Book Depot, Jaipur.

*BOOK—KEEPING*

(Only for those students who did not offer Commerce at the qualifying examination).

There shall be one paper of three hours duration carrying 100 marks.

1. The Theory and Practice of Double Entry Book-keeping and Accounts.
2. Principal and subsidiary book of Accounts—their uses, preparation and posting.
3. Bank Reconciliation Statement.
4. Cheques, Bills of Exchange and Promissory Notes.
5. Rectification of Errors.
6. Provision for Bad and Doubtful Debts Discount.
7. Account Current and Average Due date.
8. Preparation of Final Accounts with adjustments.
9. Consignment Accounts.
10. Depreciation—Nature and methods of depreciation Calculation of depreciation by Fixed Instalment Method, Diminishing Balance method and Annuity Method.
11. Elementary knowledge of system of Accounts.

*Books recommended :*

1. Elements of Book-keeping and Accounts by N. R. Sarkar
2. Book-keeping and Accounts Parts I & II latest edition Jai Narain Vaish.

3. Book-keeping and Accountancy (Hindi Version) By R. R. Gupta
4. Book-keeping for P. U. C. by Dau Dayal Bhargava.
5. Intermediate Book-keeping and Accountancy by Agarwal and Kumbhat (Hindi Version). (Students Book. Co. Jaipur).
6. Book-keeping and Accounts by C. B. Gupta.

### ACCOUNTANCY & STATISTICS

#### (Financial Accounting)

There shall be one paper of three hours duration carrying 100 Marks.

#### Group 'A'

1. Sectional and Self Balancing ledgers.
2. Preparation of Accounts from incomplete records.
3. Receipts and payments account and Income and Expenditure Account; Accounts of Non—Commercial Institutions.
4. Capital and Revenue.

#### Group 'B'

5. Higher purchase and Instalment payment Accounts.
6. Royalty Accounts.
7. Insolvency Accounts of Sole trader and partnership firm.
8. Investment Accounts.

#### Group 'C'

9. Partnership Accounts—fixed and fluctuating capitals, adjustments of closed partnership accounts; accounting for changes in the constitution of a firm viz. admission, retirement, amalgamation etc.). Conversion and dissolution including piece meal distribution of assets. Joint Venture.

Note :— Candidates will be Required to attempt at least one and not more than two questions from each group.

*Books recommended :*

1. Batliboi—Advanced Accounting
2. R. R. Gupta & V. S. Gupta—Advanced Accounting
3. Shukla & Grewal—Advanced Accountancy
4. Jain, Khandelwal & Pareekh—Advanced Accountancy
5. M. C. Sharma & Bhagwati Prasad—Advanced Accountancy
6. Pickles—Accounting

*II Year Examination. 1973*

**COMPULSORY**

*Accountancy & Statistics*

There shall be two papers of 3 hours duration each carrying 100 marks.

*Paper—I Financial and Cost Accounting*

Group A (1) Company accounts : Accounting for shares and debentures (Issue, redemption and forfeiture) : acquisition of business, Profits prior to incorporation, underwriting final accounts, Provisions, Reserves, Sinking Fund, Disposal of Profits, Bonus Shares.

Group B (2) Basic Accounting concepts and conventions.

(3) Departmental and Branch accounts including foreign Branch.

(4) Analysis of Financial Statements.  
Simple Accounting ratios, Funds flow statement.

Group C (5) *Cost Accounting :*

Objects and advantages of costing, elements of cost : recording and pricing of materials issued treatment and allocation of wages, chargeable expenses, over-head charges inside and outside the factory; basis of allocation of overheads; Machine Hour Rate : various methods of costing; Unit or out-put costing.

Note : Candidates will be required to answer two questions from Group A and at least one question each from Groups B & C.



*Books recommended :*

1. Batliboi—Advanced Accounting
2. R. R. Gupta & V. S. Gupta—Advanced Accounting
3. A. N. Agarwal—Higher Science of Accountancy
4. R. L. Gupta—Advanced Accountancy—Vol. I Theory, Method and Application—Chapters 1,22,23,26 &27.
5. Jain, Khandelwal & Pareek—Advanced Accountancy.
6. I. C. Gupta and R. C. Trivedi—A study of Cost Accounts
7. M. L. Agarwal—Parivayay Lekhakan
8. M. L. Oswal & N. K. Maheshwari— (Cost Accounts)
9. G. L. Joshi—
10. W. W. Bigg—Cost Accounts
11. H. L. Wheldon,—Cost Accounting and Costing Methods.

*Paper II—Statistical Methods*

1. *Introduction* : Growth of Statistics, Definition, Scope, uses, misuses and limitations of Statistics.
2. *Collection of Data* : Methods of Statistical investigation, collection of Primary data: Census and sample Methods: Sources of Secondary Data: Law of Statistical Regularity and inertia of Large numbers, Approximation, accuracy, Statistical errors, Editing of data.
3. *Classification and Tabulation of Data* : Meaning, characteristics, bases, classification according to attributes and variables; frequency distribution. Simple and manifold tabulation, Requisites of a good table, precautions in tabulation.
4. *Presentation of Data* : Diagrams—one and two dimensional diagrams.

Graphs—Simple histograms on natural scale and curves depicting frequency distributions.

5. *Measures of Central Tendency* : Meaning, properties, limitations, uses and calculation of Mean, Median (including Quartiles, Percentiles, Deciles) Mode, Geometric Mean, Harmonic Mean, simple and weighted average, Relative advantages and disadvantages, relationship among different averages, Standardised Birth and Death Rates.

6. *Measures of Dispersion* : Absolute and Relative measures of dispersion—Range, Quartile Deviation, Mean Deviation, Standard Deviation, Empirical relationship between different measures of variation, Co-efficient of variation.
7. *Skewness* : Tests of skewness, its importance. Absolute and relative measures of skewness. Difference between skewness and dispersion. Various types of skewed frequency distributions.
8. *Correlation* : Meaning, nature and significance. Scatter diagram and correlation graph. Calculation of Karl Pearson's coefficient of linear correlation in ungrouped and grouped data by direct and short cut methods. Calculation of probable error, interpretation, Rank Correlation, Correlation co-efficient of concurrent deviation.
9. *Index Numbers* : Need, meaning, advantages and uses of index numbers; construction of wholesale prices and cost of living index numbers with fixed base and chain base; Simple and weighted Index Number—Aggregative method and average of relatives method.
10. *Indian Statistics* : An elementary knowledge of the Statistical Organisation of India.

*Books recommended :*

1. Sakhwalker & Singh : Elements of Statistics
2. Yadav, Porwal and Sharma : Statistics.
3. Elhance. D. N. : Fundamentals of Statistics
4. Ghosh, M. K. and S. C. Chaudhary : Statistics, Theory and Practice.
5. Shukla and Sahai : Principles of Statistics
6. Statistics : G. L. Joshi.

*Books for reference :*

1. Croxton, F. E. and D. J. Cowden : Practical Business Statistics
2. Regglemann, J. R. : and I. N. Frisbee : Business Statistics
3. Kigglemann, J. R. : Graphic Methods for Presenting Business Statistics.
4. Spurr, W. A., L. S. Kellog and J. H. Smith : Business and Economic Statistics.

5. Crum, W. L., A. C. Patton and A. R. Trobutt : Introduction to Economic Statistics.
6. Waugh : Elements of Statistical Method.
7. Sprowls, R. C : Elementary Statistics.
8. Illieric : Statistics.
9. Connor and Morrell : Statistics in Theory and Practice.

### *ELECTIVE SUBJECTS*

#### *Quantitative Methods :*

There shall be one paper of 3 hours duration carrying 100 marks.

#### Group A (1) *Algebra :*

Graphic solution of linear and quadratic equations. Elementary idea of permutation and combinations. The Binomial theorem with any exponent simple problems on Binomial Theorem and Exponential and logarithmic series.

#### (2) *Calculus*

Elementary idea of functions, their limits and continuity, Derivative of a function, rules of differentiation (algebraic and logarithmic functions only), Differentiation of a Function and successive differentiation, Elementary idea of maxima and minima of a function (with reference to its application in simple business problems).

#### Group B (1) Measures of Central Tendency, Dispersion and Skewness (advanced Problems).

- (2) Analysis of Time series—Meaning, Components of time series. Practical utility : Measurement of Trend Moving average method, Method of Mathematical curve fitting of the first and second order.
- (3) Moments, Sheppard's correction, Kurtosis
- (4) Elementary knowledge of linear regression.
- (5) Index numbers—Construction of index numbers using Fisher's ideal formula—Time Reversal

Test and Factor Reserval Test; Base shifting, Splicing and deflating of Index Number.

- (6) Interpolation and Extrapolation; Meaning, uses, assumption; Newton's formula for Equal interval and Legrange's method.
- (7) Sampling-Meaning; Purposive and Quota Sampling; random; Stratified random and Multistage area random sampling; sampling and non sampling errors; concept of standard error, its use.
- (8) Elementary knowledge of Theory of Probability-Theorems of simple probabilities only.

Note :—Candidates will be required to answer atleast 2 questions from each group.

### *Books recommended*

1. Croxton, F. E. and D. J. Cowdon : Practical Business Statistics.
2. Riggleman, J. R. and I. N. Fisbree : Business Statistics
3. Spurr, W. A., L. S. Kellog and J. H. Smith : Business and Economic Statistics.
4. Crum, W. L., A. C. Patton and A. R. Terbutt : Introduction to Economic Statistics.
5. Waugh, A. E. : Elements of Statistical Method.
6. Elhance, D. N. : Fundamentals of Statistics
7. Yadav, Porwal and Sharma : सांख्यिकी
8. Sprowls, R. C. : Elementary Statistics
9. Neiswanger-Elementary Statistical Methods as applies to Business and Economic Data.
10. Dr. M. C. Gupta & S. D. Mishra-Higher Algebra.
11. B. R. Gangawal & R. C. Gour-A Text Book of Algebra.
12. G. C. Patni & R. C. Gour-Elementary Calculus.
13. M. R. Ray & S. S. Soth-Elements of Calculus.
14. S. M. Mathur-A New Text Book on Differential & Integral Calculus.

*III YEAR EXAMINATION, 1974*  
*COMPULSORY SUBJECTS*

*Accountancy and Statistics :*

There shall be two papers of 3 hours duration each carrying 100 marks.

*Paper I Taxation Law and Accounts.*

Group A Income Tax : Elementary study of the Income-tax Act, 1961 (80 Marks)

1. Definitions, Different types of assessee.
2. Basis of Charge—residential status of assesses, scope of total income.
3. Computation of total income under different heads—Incomes of other persons included in the assessee's total income. Depreciation and development Regates.
4. Aggregation of Income and set off and carry forward of losses.
5. Exemptions, deductions, regates etc.
6. Income Tax authorities.
7. Computation of tax liability of individuals and firms.
8. Assessment Procedure, Collection and recovery of tax; refunds; appeal and revision, penalties, offences and prosecutions.

Section B—Rajasthan Sales Tax Elementary knowledge (20 marks of the Act is required).

1. Definitions.
2. Liability to Tax Commodities taxed, Commodities exempted.
3. Procedure relating to registration and assessment.
4. Payment and Recovery of Tax.
5. Sales Tax authorities, appeals, revision, offences penalties and prosecutions.

Note : Knowledge of rate structure of various committees under the Rajasthan Sales Tax Act is not required.

*Books recommended :*

1. Dr. H.C. Mehrotra—Income Tax Law and Accounts (Hindi & English version).
2. B.K. Agarwal—Income Tax Law and Accounts (Hindi Edition).
3. R.R. Gupta—Income Tax (आयकर)
4. Rajasthan Sales Tax Act.—Govt. Publication.
5. J.K. Jain, Law of Sales and Purchase Tax in Rajasthan.
6. N.L. Pokharna—The Law relating to Sales and Purchase Tax in Rajasthan.

*Books for reference :*

1. R.R. Gupta & V.S. Gupta—Income Tax Law and Practice.
2. Law of Income Tax in India—V.S. Sundaram.
3. Kanga and Palkiwala—Law and Practice of Income Tax.

*Paper II Auditing.*

1. Meaning and objects of Audit; Principles, technique, & procedure of audit; limitations of audit.
2. Kinds of audit; Continuous, periodical and Interim audit
3. Internal Accounting Control : Internal Check and Internal Audit.
4. Audit Programme.
5. Vouching.
6. Verification of Assets and Liabilities, their valuation.
7. Auditing of Accounts of Private Concerns & Partnership
8. Appointment, Removal and Remuneration, of a Company Auditor.
9. Rights, Duties and Liabilities of an auditor.
10. Audit of Joint Stock Companies with special reference to share capital, debentures, managerial remuneration, Depreciation and Provisions and Statutory Report.
11. Divisible Profits including treatment of Dividend and Reserves.
12. Audit of Co-operative Societies.
13. Audit Reports.
14. Investigation of Accounts.

15. History of Accountancy Profession in India.
16. Study of the following leading cases :—
  - (a) Commissioner of Income-tax, Madras Vs. G.M. Dandekar 1952.
  - (b) Council of the Institute of Chartered Accountants of India Vs. B.K. Sen, 1970.
  - (c) Controller of Insurance Vs. H.C. Dass, 1957.
  - (d) Anupam Roy Vs. P.K. Mukerjee, 1956.
  - (e) London and General Bank case, 1895.
  - (f) Kingston Cotton Mills case 1896.

*Books recommended :*

1. D.C. Jain & M.C. Khandelwal—अडिटिंग (Auditing).
2. R.R. Gupta : A Text Book of Auditing.
3. A.N. Chitlangi : Auditing (Hindi Medium).

*Books for reference :*

1. Spicer and Peglar : Practical Auditing (Indian edition).
2. De Paula—Principles of Auditing (Indian Edition)
3. J. Lancaster—Principles and Practice of Auditing.
4. R.G. Williams—Elements of Auditing.
5. J.R. Batliboi—Principles and Practice of Auditing.
6. Mautz and Sharaf—Philosophy of Auditing.
7. Ronald I. Irish—Auditing.
8. Stracey—English Accountancy.

### *ELECTIVE SUBJECT*

*Costing :*

There shall be one paper of 3 hours duration carrying 100 marks.

1. Elements of Cost and costing technique.
2. Recording and accounting of Direct materials, stores, and finished stock.
3. Recording and accounting for labour; various. Methods of remunerating labour, incentive systems.

4. Overhead : Clasification according to functions and variability; collection, allocation apportionment and absorption of overheads.
5. Treatment of idle time and over time, losses on account of Depreciation, natural waste and obsolescence.
6. Principal systems of cost finding Out-put or Unit costing. contract and Job costing Process costing, Operating costing.
7. Costing of by-products and joint products.
8. Reconciliation of Cost and Financial Accounts.
9. Marginal Costing.
10. Cost Audit.

*Books recommended :*

1. I.C. Gupta and R.C. Trivedit—A study of Cost Accounts.
2. M.L. Agarwal—Parivayay Lekhakan.
3. W.W. Bigg—Cost Accounts.
4. H.L. Wheldon—Cost Accounting and costing Method.
5. G.L. Joshi—Cost Accounts.
6. M.L. Oswal and N.K. Maheshwari : (Cost Accounts).
7. P.K. Ghosh—An introduction of cost Accounting (National Publishing House, Delhi).
8. B.K. Bhar—Cost Accounting—Methods and Problems (Academic Publishers, Calcutta).
9. N. Sarkar—Principles and Practice of Cost Accounting (Academic Publishers, Calcutta).
10. R.R. Gupta and V.S. Gupta—Cost Accounts

*Books for reference :*

1. Backer & Jackson—Cost Accounts (Mc Graw Hill Book Co. New York)
2. Blocker & Weltmer—Cost Accounting (Mc Graw Hill Book Co.)
3. Buyers & Holman—principles of Cost Accounting (Donnington Press)
4. Newner-Irwn Inco-Hill Illinois—Costaccount—Principles and Practice.
5. Metx. Curry, Frank—Cost Accounting (South Western Publishing Co.)



*M. Com.*

M. Com. (Previous) Examination, 1972.

M. Com. (Final) Examination, 1973.

*COMPULSORY PAPERS*

Paper II      *Management Accountancy & Financial Control*

Add the following books after serial 15.

- (1) Kohler—Accounting for Management
- (2) N. Sarkar—Management Accounting.
- (3) M. Gordon & G. Shillinglaw—Accounting—A Management approach.

*OPTIONAL PAPERS*

Paper VI      *Cost Accounting :*

Add at Serial 10—Uniform Costing

Add the following books after serial 14 .

- (1) Neuner—Cost Accounting—Principles and Practice.
- (2) Backer & Jackson—Cost Accounting
- (3) Matz, Curry & Frank—Cost Accounting
- (4) J. Batty—Standard Costing
- (5) J. K. Lasser—Hand book of Cost Accounting.

### APPENDIX III

(Ref :—Res. No. 12 dated 15-3-71 of Faculty of Commerce)

Minutes of the meeting of the Board of Studies in Economic Administration and Financial Management held on Thursday, the 5th of November, 1970, at 2.30 P.M. in the Senate Room, University Office, Jaipur and on Friday, the 6th of November, 1970 at 10 A.M. in the University College of Commerce, Jaipur.

#### Present

1. Dr. Om Prakash (Convener)
2. Dr. M.L. Mishra.
3. Dr. P.S. Sood.
4. Dr. N.K. Sharma.
5. Shri N.L. Kulshreshtha
6. Dr. C.B. Memoria (Reader in Commerce, University of Udaipur).
7. Shri K.K. Mehrishi (Joint Director of Education, Government of Rajasthan, Jaipur)—  
Present on the 5th November only.

1. At the outset, Dr. Om Prakash was unanimously requested to take the chair. Thereafter, under Section 24 E(8) of the University of Rajasthan Act, Dr. Om Prakash was appointed Convener of the Board of Studies.

2. Under Section 34 (4) (iv) of the University Act, Dr. N.K. Sharma of Government College Ajmer, was elected as member (other than the Convener of the Board of Studies) to serve on the Committee for the selection of examiners on the subject for the year 1971.

3. The reports of examiners and question papers set for the examinations of 1970 were perused. It was observed that in the paper on Monetary Theory for the M.Com. (Banking & Finance) Examination, there was no Hindi translation of Q.8 (a) to (e). Likewise, in Paper V on International Banking for the same examination there was no Hindi version in respect of Q.10 (a) to (e). The Registrar was requested to

ascertain if there were printing mistakes or the omissions existed in the question papers as set by the examiners concerned.

4. The statements of qualifications and teaching experience etc. of teachers (received from the University Teaching Wing, affiliated institutions and other Universities) were scrutinised for inclusion in the revised pannel of examiners for 1972.

5. The courses of study and text books were recommended as per Appendix for the P.U.Com. and B.Com.(Pass)First Year Examination of 1972, B.Com. (Pass)Second Year Examination of 1973, B.Com. (Pass) Final Year Examination of 1974, B.Com. (Hons.) Examination of 1973/1974, Diploma in Cooperation Examination and Diploma in Banking and Finance Examination of 1972. The following new scheme for M.Com.(Previous)Examination of 1972 and M.Com.Final Examination of 1973 (along with detailed courses of study and text books as mentioned in Appendix) were recommended for the Department of Economic Administration and Financial Management :

Group A—*Banking*

- I. Monetary Policy.
- II. International Banking.
- III. Management of Banking Institutions in India.
- IV. Development Banking and Investment Management.

Group B—*Finance*

- V. Costing and Management Accounting.
- VI. Materials Management.
- VII. Financial Administration.
- VIII. Productivity. and Quality Control.

Group C—*General*

- IX. Economic Analysis.
- X. Principles and Practice of Economic Administration.
- XI. Modern Management.
- XII. Quantitative Techniques.

Group D—*Industry*

- XIII. Administration of Public Enterprises.
- XIV. Industrial Economics.
- XV. Transport Economics.
- XVI. Cooperation and Agricultural Organisation.

Group E—*Trade*

- VII. International Trade and Commerical Intelligence.
- XVIII. Marketing Strategy and Internal Trade.
- XIX. Foreign Exchange and Commerical Policy.
- XX. Export Techniques and Strategy.

Notes :

- (i) For the M.Com. (Economic Administration) degree, a candidate shall choose eight papers from Groups C (which will necessarily include Paper IX Economic Analysis and Paper X on Principles and Practice of Economic Administration), D and E, selecting atleast two papers from each Group.
- (ii) For the M.Com. (Financial Management) degree, a candidate shall choose eight papers from Groups A (which will necessarily include Paper First on Monetary Policy) B and C (which will necessarily include Paper IX on Economic Analysis), selecting atleast two papers from each Group.
- (iii) Each paper shall carry 100 marks, out of which 10% marks shall be reserved for sessional work (i.e. each of the written question papers in which the candidate appears at the end of the session shall be of 90 marks only).
- (iv) At the M.Com. (Final) stage a candidate (with at least 55% marks at the M.Com. Previous Examination) may be allowed to offer Survey in lieu of of one paper (excluding those papers which have to be necessarily offered). The survey shall carry 100 marks and shall be a case study or specialize dissertation of about 100 typed pages (roughly 25,000 to 30,000 words) in the field of that particular paper (in lieu of which the Survey is offered).

- (v) There shall be a Vive Voce of 100 marks at the M. Com. Final stage in addition to the eight papers.
6. The suggestions received from the teachers of various institutions with regard to the courses of study were considered.
- 7.(a) The suggestions of the Vice-Chancellor made in consultation with the Convener of the Examination Reforms Committee with regard to the award of sessional marks were considered. In view of the impending changes in the Scheme of Examination, the Board did not go into the details of the proposed bifurcation of marks. Instead, the Convener, Dr. Om Prakash, was authorised to give his opinion on behalf of the Board according to the needs of the situation.
- (b) With regard to the suggestions regarding courses of the Post-graduate level it was felt that to start with, a scheme having two papers for each half year instead of four papers for a full year) might be tried.
- (c) It was resolved to recommend that the suggestion regarding self-study for a few bright students on preassigned topics (to form as basis for assessment regarding the award of sessional marks) might be accepted.
8. The Board considered the draft resolution prepared by Dr. Daya Krishna, Chairman, Examination Reforms Committee (formed as a result of discussions in the meeting of the Examination Reforms Committee held on 17th April, 1970 and accepted by the Academic Council vide its Resolution No. 35 dated 21st April, 1970) regarding preparation of alternative Scheme of Courses and Examinations. It was felt that further necessary action might be taken at a later stage after taking into account the experience of the new Courses which the Board had already drafted.
9. The Board considered a complaint dated 29th April, and 2nd May 1970 received from certain Principals of affiliated Colleges against the Economics Third Paper of Final Year T.D.C. (Commerce) Examination along with the remarks of the paper-setter (to whom a reference had been

made earlier). On a perusal of the Syllabus (1966 Ed.) it was found that the U.S.S.R. formed part of the study of Economic Development. Accordingly, the Board came to the conclusion that the Question Paper was correctly drawn up according to the 1966 and 1967 editions of the syllabus *and that* there was no lapse on the part of the paper-setter.

The meeting ended with a vote of thanks to the Chair.

Sd/-Om Prakash

*Convener*

## APPENDIX X

(Resolution No. 5 dated November 5/6, 1970)

Board of Studies in Economic Administration and  
Financial Management.

P.U.C. Examination, 1972—Same as for 1971.

*First Year T.D.C. (1972 examination)*

*I. Indian Economy :*

The paper will be divided in two sections; Section A and Section B. Students will be required to attempt at least two questions from each section.

Section A—Economic Geography of India.

Section B—Elements of Indian Economy.

Syllabus Book and the same as prescribed for 1971 Examination

B.Com. (Pass) First Year 1972

*(Compulsory Group III)*

Indian Economic Administration

Nature, importance & technique of economic administration.

Economic aspects of Indian Constitution.

Concept of planning. Planning machinery and its functions.

State in relation to national economy.

(regulation, administration & promotion of agriculture, industry & Banking in India).

Role of Public Sector.

II<sup>nd</sup> Year T.D.C. (1973 Examination)

*Paper I : Principles of Economics :*

The paper will be divided into two Sections, Section A and Section B. Students will be required to attempt at least two questions from each section (five questions in all).

*Section A*

1. Introduction : Functions of economic system, definition and scope of economics. Economic laws, deductive and inductive methods. Significance of economics.
2. Consumption, Wants, Utility : Cardinal and ordinal approaches. Laws of diminishing marginal utility. equimarginal utility, consumer's surplus; demand, increase and decrease; and extension and contraction of demand, law of demand, price elasticity of demand, degrees of elasticity, measure of elasticity.
3. Production: The factors of production land, labour, theories of population, division of labour, efficiency of labour, Capital-characteristics, capital formation, organisation the scale of production, large and small, the concept of the indivisibility and internal and external economics. The laws of Returns and returns to scale.

*Section B*

4. Exchange : Market-its classification and cost of production, prime cost and supplementary cost, concept of opportunity cost, analysis of revenue, price determination in the short and long periods under the conditions of perfect competitions, monopolistic competitions and monopolies discriminating monopoly, control of monopoly.
5. *Distribution* : Natural income and economic Welfare. The marginal productivity theory, theories of the determination of rent, wages, interest and profits.

Books : Same as recommended for 1971 Examination of IInd Year, T.D.C.

IInd Year T.D.C. (1973 Examination)

*Paper II : Money and Banking*

1. Money : (a) Evolution, nature and functions of money. The role of money in various economic systems. Classification of money.  
(b) Value of money. The Quantity Theory. Cambridge and Keynesian equatoin.



- (c) Inflation and Deflation; their effects on economic growth.
  - (d) Index Numbers; their importance.
  - (e) Paper Money; principles and methods of note issue.
  - (f) Monetary Standard; evolution, growth, downfall and present position of gold standard.
2. Currency : A study of Indian currency since 1925. The present system of Indian currency.
  3. Banking : Types of banks, operations of a Commercial Bank. The role and functions of a Central bank. The Indian Banking system: Characteristics and organisation; the role of public and private sector banks. Recent Trends.

A detailed study of the functions and working of the Reserve Bank of India. Its role in the Indian Economy.

4. Development Finance : An elementary study of industrial finance and its sources in India.

Same as for III Year T.D.C., 1973

Examination (Current)—p.p. 38–39.

*Books Recommended :*

IIIrd Year T.D.C. (1974 Examination)

Paper I : *Planning and Economic Development.*

1. Theory of Planning.
2. Economic Development in India since independence.
3. Lessons from Economic Development of U.S.S.R. & Japan with special reference to agriculture, industry, trade and transport.

IIIrd Year T.D.C. (1974 Examination)

Paper II : *Elements of International Finance :*

1. International Trade : The need, importance and problems of international trade. Balance of trade

and balance of payments. Methods of international payments.

2. Short-term finance : for exports and imports. Acceptance and discounting of bills. The role of Discount and Accepting Houses.
3. Documentary credit.
4. The Euro-currency market and its importance in international finance.
5. Exchange rates.
6. Forward Exchange, the process, problems and benefit of dealings in forward exchange.
7. Balance of Payments, methods and techniques of balancing international payments.
8. I.M.F., Its role and function.
9. Long-term International Finance; nature and problems. The export-import banks of U.S.A. and Japan.
10. Insurance of Exporter's credit; the export-credit and guarantee schemes in U.K., and India. Role of Export Credit and Guarantee Corporation in promoting Indian exports.
11. Development Finance : The I.B.R.D. and its affiliates. The Asian Development Bank. Their role in economic growth of backward regions.
12. Foreign Aid : its philosophy and application. The impact of P.L. 480 funds on Indian economy. Trends in the growth of foreign aid. Problems and future prospects of foreign aid in economic development. The UNCTAD.

*Books Recommended :*

1. Scammell, W.M. : International Monetary Policy.
2. I.M.F., World Bank and Asian Development Bank-Annual Reports.
3. Basu, S.K. : A Survey of Contemporary Banking Trends.
4. Little, I.M.D. : International Aid.
5. Samuelson, Paul A. Economics.

## IInd Year T.D.C. (1973 Examination)

Paper I : *Law & Practice of Banking* (Optional)

1. Banker and Customer; General and Special relationship.
2. Opening of Current, Savings and Fixed Deposit Accounts; operation of accounts of various types of customers. Closing of an account.
3. Negotiable Instruments: Cheques, Bills of Exchange, Promissory notes and Hundies, Endorsement and Crossing.
4. Presentment, Collection and payment of negotiable instruments. Protection to the collecting and paying bankers.
5. Dishonour, noting and protesting of negotiable instruments.
6. Bankers Credit, various instruments of credit viz. Letters of credit, circular notes, confirmed and unconfirmed credit. Revolving credit and Acceptance Credit.
7. Bankers Advances against marketable securities, real property, debentures and shares, goods and life insurance policies.
8. Bank organisation, management and accounts. Bankers clearing house.
8. Salient features of the Banking Regulation Act 1949 and Reserve Bank of India Act 1935 with latest amendments.

Books : Same as recommended for IIIYr. T.D.C. 1972  
Examination (p.p. 46-47).

## IIIrd. Year T.D.C. (1974 Examination)

Paper : *Theory and Practice of Cooperation*

1. Introductory—Origin and development, Definitions, Cooperative Principles and their analysis, Cooperation and Capitalism and Socialism, Cooperation as a synthesis.
2. History and Growth of Cooperative Movement in India before independence and during Planning era, Role of cooperation during the Plans.

## 3. Cooperative Banking Structure :

Agricultural Credit Societies, Service Societies, Large-sized Societies, Central Cooperative Banks, State Cooperative Banks, Land Development Banks.

## 4. Cooperative Marketing and processing :

Aims objects, Structure, Sources of Finance, Business Practices, Linking of credit with marketing, Development of processing societies with special reference to sugar cooperatives, Problems and suggestions.

## 5. Consumer's Cooperations Meaning objects, Progress during plan structure Working, Management, Pricing Policy, Problems and suggestions.

## 6. Other forms of Cooperatives :

(1) Cooperative Farming

(2) Housing Cooperative

(3) Industrial Cooperatives

(4) Urban Credit Cooperatives

## 7. Cooperative Management :

Importance, Functions of the General Meeting, Board of Directors, Delegation, Promotion Recruitment Policy, Problems of Cooperative Management.

## 8. Cooperative Audit and Supervision.

## 9. State and Cooperation.

## 10. Cooperative Education and Training.

## 11. Cooperative Movement in Rajasthan.

*Books Recommended :*

1. BEDI, Theory and Practice of Cooperation.
2. B.S. Mathur, "Bharat Men Sahkarta."
3. R.B. Upadhyay and O.P. Sharma, Cooperation and Community Development.
4. Tyagi, Trends of Cooperative Movement in India.
5. Reserve Bank of India, Review of Cooperation.

N.B. : Same books to be added for 1972 Examination of II Year T.D.C.

## M.Com. Examination

(Economic Administration and Financial Management)

*I. Monetary Policy*

1. Monetary Economics: Scope, Importance—money and the price mechanism, money as dynamic force. Relationship between Monetary Policy and Fiscal Policy.
2. Monetary theory—Quantity theory, recent developments in monetary theory; savings, investment and income, multiplier and accelerator: savings and investment in a centralised economy; money and rate of interest.
3. Monetary Policy—aims of monetary policy; limitations of monetary policy; monetary policy in a developing economy.
4. Monetary policy in India since 1947, its institutional limitations and role in promoting economic development. Demand Pull Inflation and Supply Elasticities. Selective Credit Controls, changes, in Interest Rates and open market operations. The impact of Devaluations. Terms of trade between Urban and Rural Sectors of the economy. The Reserve Bank and nationalised commercial banks.
5. Money and the Trade cycle—features and causes of fluctuation, monetary theories of fluctuations.
6. International monetary mechanism — the gold standard mechanism, the gold dollar mechanism of the I.M.F, Reform of the International Monetary System; the concept of International liquidity—the S.D.R. Scheme and India.

*References :*

1. Harry G. Johnson : Essays in Monetary Economics.
2. Paul M. Horvitz : Monetary Policy and the Financial Systems.
3. G.N. Halne : Monetary Theory.
4. Fritze Machlup: International Monetary Economics.
5. V.R.M. Desai & B.D. Ghonesgi : Monetary Policy and Central Banking in India.

6. Walter W. Haines : Money, Prices and Policy.
  7. Milton Gilbert : The Gold Dollar system.
  8. I.M.F. Reports.
  9. J.M. Keynes : The General Theory of Employment, interest and Money.
  10. K.K. Sharma, Role of Monetary Policy in Planned Economy (Meenakshi Prakashan, Meerut).
  11. C.K. Johri, Monetary Policy in a Developing Economy (The World Press Private Ltd. Calcutta).
2. बी.सी. सिन्हा- मौद्रिक अर्थशास्त्र (लोक भारती प्रकाशन, इलाहबाद, 1969)

#### Paper II. *International Banking*

1. Rise of Commercial Banking, Growth of Central Banks; Recent trends and developments in the theory of Central Banking; Central Banking in underdeveloped economies.
2. The organisation and working of commercial, agricultural, industrial and central banking in U.K. U.S. ...., Japan, West Germany, U.S.S.R., Pakistan and Ceylon.
3. The London and New York money markets.
4. A detailed study of international and regional financial institutions L.M.F., World Bank and its Affiliates, Asian Development Bank.

#### *Books :*

1. De Kock : Central Banking.
2. R S. Sayers : (i) Modern Banking.  
(ii) Central Banking in under developed countries.  
(iii) Banking in Western Europe.  
(iv) American Banking System.
3. H. Y. Schiffor: Modern Japanese Banking System.
4. Bank of Japan: Money and Banking in Japan.
5. Beckhart: Foreign Banking Systems.

6. Annual Reports of Central Banks of U. K. U. S., Japar West Germany, U. S. S. R. Pakistan and Ceylon.

*M. Com.*

### PAPER III. Management of Banking Institutions in India

#### SECTION A

Banking and Economic Growth; The bank as a business enterprise; Competition and Coordination between various institutions; Management of a bank; Management of bank liabilities; Management of bank assets, including port-folio policy; profits and the banking system and bank liquidity; Personal Management;—problem of recruitment, placement, training and promotion. Morale of bank employees, there sense of service, productivity and efficiency. Employee Dissatisfaction, strikes and work-to-the rule campaigns, Communication, leadership and motivation. Fringe benefits. Unit Costs.

#### SECTION B

Management of the Reserve Bank of India; State Bank of India and its subsidiary Banks; Growth of Development and Finance institutions; Cooperative Banks; recent Structural Changes and Regulatory Banking Policy; Social Control of Banks; Management of Nationalised Commercial Banks; Viability of Rural Banking Institutions.

#### *Books Recommended :*

1. Edward W. Reed : Commercial Bank Management.
2. Rolland I. Robinson : The Management of Bank Funds.
3. B.M.L. Nigam : Banking and Economic Growth.
4. Peter F. Drucker: Managing for Results.
5. William J. Gore and J.W. Dyson (Ed.), The Making of Decisions.
6. Herbert J. Hicks: The Management of Organisations.
7. S.K. Basu: Theory & Practice of Development Banking.
8. S.K. Basu: Contemporary Banking Trends.
9. S.G. Panadikar: Banking in India.
10. Vasvani: Indian Banking.
11. S.K. Muranjan: Modern Banking in India.
12. A.D. Shroff: On Planning and Finance in India.

13. K.N. Raj, Monetary Policy of the Reserve Bank of India.
14. V.R. Desai, Banking Development in India.
15. B. Rama Ray, Evolution of Central Banking in India.
16. G.M., Land Cooperative Banking in India.
17. D.D. Hester, Indian Banks, their Portfolios, Profits and Policy.

Paper IV *Development Banking and Investment Management*

Candidates required to attempt Five questions, selecting at least two from each section.

*Section A Development Banking.*

1. The concept of a Development Bank and phases in its evolution.
2. Ownership and sources of funds.
3. Commercial Banking business of Development Banks.
4. Scope and Coverage of the functions of Development Banks.
5. Loan and Investment policies of Development Banks.
6. Management of Development Banks.
7. Promotional Role of Development Banks.
8. Central Banks and Development Banks.
9. Detailed Study of I.F.C.I., I.C.I.C.I., S.F.C.S. and Industrial Development Banks of India.

SECTION B. *Investment Management*

1. Investment Function: Concept, importance and its relationship with other areas, the Macro-Environment, Investment Criteria.
2. Financial Planning, sources and forms of external and internal financing.
3. Investment channels and media: Long-term assets, fixed assets and current assets, corporate and Government securities, inter-firm investment policies.
4. Decision for short-term investment: Inventory, Receivables and Liquidity management.
5. Decision for long-term investment: Capital budgeting, Project selection, Cost of capital and capital structure planning.



6. Management of Income: Dividend determination and retention of profits.
7. Appraisal of applications for term loans and negotiation for term borrowings.
8. Marketing of Securites: Underwriting and capital issue.
9. Valuation: Decision-making for various types of valuation.
10. Legal Safeguards: Tax considerations in investment management.

*Books recommended (Section A) :*

1. Report of the Financial Committee on Agricultural Credit Medium term credit to Industry (League of Nations).
2. Royal Commission on Banking & Finance 1962.
3. Problems & Practices of Development Banks by Shirley Boskey
4. Theory and Prectice of Development Banking by S.K. Basu.
5. Development Banks by William Diamond.
6. Changing Structure of Industrial Finance in India by L.C. Gupta.
7. Annual Reports of I.F.C., I.C.I.C I., S.F.C.S. and I.D.B.I.

*(Section B)*

1. Harold Bierman & Seymour Smidt: The Capital Budgeting Decision.
2. John N. Myer: Einaancial Statement Analysis
3. Bates G.E. Investment Management: A Case Book.
4. Bodger R.E. & Others: Investment Principles & Practice.
5. Hunt & Others: Basic Business Finance.
6. Porterfield T.S: Capital Cost and Investment Decisions.
7. Johnson : Financial Management.
8. Douglas A: Hayes: Investment Analysis and Management.
9. Graham & Dodd. Security Analysis

10. Badger and Guthmann: Investment: Principles & Practice.
11. Krishnan, J.E. Principles of Investment.
12. Lerner E.M: Readings in Financial Analysis and Investment Management.
13. Prime F.H: Investment Analysis.
14. West H.C: The Root Principles of Investment.
15. Whyte L.G: Principles of Finance & Investment (Two vols.)
16. Sinha S.L.N: The Capital Market in India.
17. Kuchhal, S.C: Corporation Finance; Principles and Practice.
18. Mehta, R.C.: Capital Market in India for Planned Group
19. Ezra Solomon: Theory of Financial Management.

*Paper V Costing and Management Accounting*  
*Section A (Costing)*

1. Concepts and Methods (Brief Theoretical Discussion)
2. Standard Costing and Analysis of Variances.
3. Budgetary Control and Capital Budgeting.
4. Cost Analysis and Management Decisions—Flexible Budgets, Marginal Costing, Break-even Analysis, Profit Planning Plant Shutdown and selling Cost Analysis.
5. Costs and Pricing Policy—Stability of Accounts. Costs, Competitors: Costs and Alternative Approaches of Economists (A short case or problem to be posed).

*Section B (Management Accounting)*

6. Investment Appraisal and Feasibility of Projects.
7. Inventory Management.
8. Cash-Flow/Fund-Flow Analysis, Cash Budgeting and Management of Works Capital.
9. Accounting/Financial Ratios.
10. The Role of Management Accountant—Reporting and Information System for arriving at economically sound decisions.

*Books Recommended :*

1. Carl Thomas Devines, Cost Accounting and Analysis.
2. Welsh, Budgeting—Profit Planning and Control.
3. Blocker and Melther, Cost Accounting.
4. Framgen, Management Cost Analysis.
5. Backer and Jacobson, Cost Accounting : A Management Approach.
6. Rebnett Hill and Beckett, Accounting : A Managerial Approach
7. Anton and Firman, Contemporary Problems in Cost Accounting.
8. Nícheson, Managerial Cost Accounting and Analysis.
9. Shyamal Banerjee and J.B. Bhattacharya, Handbook of Costing.
10. Lawrence (Revised by Ruswinckel), Cost Accounting.
11. Institute of Cost and Works Accountants, London, An Introduction to Budgetary Control, Standard Costing, Material Cost and Production Control.
12. Roberet N. Anthony, Management Accounting—Text and Cases.
13. J. Batty, Management Accounting.
14. R. Warwick Dobson, Management Information and Accounting.
15. Ronello B. Lewis, Accounting Reports for Management.
16. Keller and Ferara, Management Accounting for Profit Control.
17. Slavin, Reynolds and Malchman, Basic Accounting for Managerial and Financial Control.
18. Gordon and Shillinglaw, Accounting—Management Approach.
19. N.K. Kulsreshtha—An Introduction to Management Accountancy.
20. Institute of Chartered Accountants of India, Reports of All-India Seminars on Management Accounting.

21. Charles T. Horngren, *Accounting for Management Control : An Introduction.*

Paper VI—*Materials Management :*

1. *Economics of Purchasing*
  - (a) What to buy ?
  - (b) When to buy ?
  - (c) Where to buy ?
  - (d) How much to buy ?
  - (e) How much to pay ?
2. *Special Problems of Purchasing in big Organizations/Government Departments/Public Enterprises.*

Bulk Purchasing, Central Purchasing, Critical Examination of the Tender System and its various forms, Long term Agreements, Inter-relations of public services, Reducing Varities, Control versus Freedom in public purchasing, Professional Standards Expertise in public officials, Safety First Principle as Trustee of Public funds, Factors leading to overstocking of materials in public undertakings.

3. *Levels of Inventory :*
  - (a) Crash Approach, Historical Approach, Intuitive Approach and Statistical Approach.
  - (b) Purposes of maintaining inventories—to uncouple successive operations, to let one unit schedules its operations independently of another and to render a certain level of customer service. Lot-size Inventories Fluctuation Stocks and Anticipation stocks.
  - (c) A.B.S. Analysis. Control over various category of items—The Vital Few, The Middle Group and the Trivial Money.
  - (d) Programming and Provisioning. Mathematical (elementary) Approach to Inventory Control and Planning, The square Root of Sales Principle.
  - (e) Lend Times—Technical and Administrative—Movement Inventory—( $I=SXT$ .) The Two-Bin system.

(f) Determination of optimum level of inventory as the most attractive combination of cost and revenue off-setting errors in forecasting demand. Ensuring more economic utilization of equipment, manpower etc. Minimising the adverse efforts of ahead-of-schedule and behind-the-schedule conditions. Procurement costs, carrying costs and safety stock costs. Base stock system and Periodical Review. Problems, connected with slow-moving non moving stores.

(g) Basic Principles—Never to run out of anything. Not to built up a very large inventory. Not to send too many small costly orders.

4. *Financial Approach :*

Inventory Planning in the context of management of working capital, cash budgeting and fund-flow analysis.

5. *Cost Accounting Approach :*

Prices at which materials are to be charged to production. Breaking of Bulk. Spoiled and Defective Materials. Standard Costing and variance analysis Material Price variance, Material Quantity (Usage) Variance and Material Mix Variance. Statistical Quality Control. Cost of Materials Handling.

6. *Warehousing : Problems of Physical Control of the Raw Materials, Work-in-Progress and Finish Goods. Packing and Modes of Despatch. Procedures and Records.*

*References :*

1. John F. Mage :            Production Planning and Inventory Control.
2. F.G. Moore :            Production Control.
3. Raymond R. Mayer :    Production Management.
4. Elwood S. Buffa :        Modern Production Management.
5. Committee on Public Undertaking (Third Lok Sabha)  
40th Report on Material Management in Public undertakings, Lok-Sabha Secretariat, New Delhi, March 1967.

6. Sayamal Banerjee and J.B.—Handbook of Costing.  
—Bhattacharya :
7. Carl Thomas Devine : Cost Accounting and Analysis.
8. J. Batty : Management Accountancy
9. Norber Lioyed Enrick: Management Planning ( A Systems Approach).

Paper VII : *Financial Administration* :

Candidates be required to attempt five questions, selecting at least two from each section.

Section—A : (*Business Finance*)

1. Role of Finance in Modern Business : The need for funds. Origination of financial function. Duties and responsibilities of Financial Manager.
6. Financial Planning : The basic objectives of financial planning; concept of capital; capital structure; over-capitalisation and under-capitalisation. An optimum financial plan.
3. Sources of Finances : Long, medium and short term sources, instruments of finance, corporate securities, common and preference shares. Bonds—Risk, income, control and cost considerations, composite cost of capital, Marketing and underwriting of securities, control of capital issues in India.
4. Working Capital : estimating requirements of working capital, sources of working capital finances, management of cash, receivables and inventories. Fund-flow and Cash-flow analysis.
5. Financial Performance Appraisal : Profit planning project planning and effect of new financing; Income, Surplus and Dividend policies, Concept of Return on capital Financial Ratios, interpretation of financial reports and statements, Capital and Cash Budgets.

Section—B : (*Public Finance*) :

1. Role in a developing economy : nature, scope, Principles of Public Finance. Maximum Social Advantage.

2. Study of Public Revenues : Financial Powers between the Union and States. Finance Commission, Principles of taxation, taxation of income, commodity taxation, non-tax revenue, the theory of incidence.
3. Theory of Public Expenditure : recent trends in expenditure of Union and States. Plan and Non-Plan expenditure. Defence Vs. Development expenditure. Deficit Financing.
4. Public Debt : recent trends, interest rates, floating redemption and conversion. Foreign Debts.
5. Public Budgeting : Objectives, principles, problems and classification of budgets. Procedure and preparation of Union and States' budgets Performance budgeting; Delegation of financial Powers. Audit and Control, System of Financial Committees.

*Books recommended :*

*For Group A.*

1. Hunt, Williams and Donaldson, Basic Business Finance.
2. C.W. Gerstenberg : Financial Organisation and Management of Business.
3. Guthmann & Dongall : Corporate Financial Policy.
4. Walker & Baughn : Financial Planning and Policy.
5. Hastings Paul G. : The Management of Business Finance.
6. Cohen & Robbins : The Financial Manager.
7. Brant L.K. : Business Finance.
8. Kuchhal, S.C. : Corporation Finance.
9. Kulshreshtha, R.R. : Corporate Financial Management (Hindi).
10. Sharma & Chauhan : Element of Corporation Finance.

*For Group B.*

1. Hicks, Ursula : Public Finance.
2. Dalton : Public Finance.

3. Bhargava, R.N. : Theory & Working of Union Finance in India.
4. Misra, B. : Fiscal Policy in the context of Planning.
5. Tripathi, D.N. : Fiscal Policy & Economic Development in India.
7. Agarwala, S.N. : Indian Public Finance.
6. Saxena, R.C. & Mathur, P.C. : Public Economics.
8. Taylor : The Economics of Public Finance
9. Pigou, A.C. : A Study in Public Finance.
10. Reports of Finance Commissions.

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*Economic Administration & Financial Management*

Paper VIII : Productivity and Quality Control.

*Section A—Productivity :—*

1. Basic Productivity Concepts.
2. Rational and Importance of Productivity Analysis.
3. Factors affecting Productivity.
4. Productivity Indices.
5. Measurement of Productivity.
6. Productivity Components and their Interrelationship.
7. Productivity Adjustments and Managerial Decision Making Process.
8. Source and nature of Productivity Adjustments.
9. Importance of Industrial Productivity in the under-developed world with special reference to India.
10. Productivity Movement in India.
11. General Productivity Trends in India.

*Section B : Quality Control :*

1. Meaning, Concept, Growth and Importance of Quality Control.



2. Quality Control—An Engineering tool to raise industrial efficiency.
3. Quality Control and Productivity increase.
4. Methods of Quality Control :
  - (a) Inspection Method.
  - (b) Statistical Methods :
    - ( i ) Frequency Distributions.
    - ( ii ) Control Charts.
    - ( iii ) Sampling Tables.
    - ( iv ) Special Methods : Corelation, Significance tests and analysis of variance.
  - (c) Other Technical Methods : tolerance analysis, precision guaging and preventive maintainance,
5. Application of the Quality Control in the Plant : New Design Control, Incoming Material Control, Product Control, Special process Studies.
6. Introduction of the Quality Control in the Plant : Selling the Quality Control Programme.
7. Measures: Introduced for Quality Control in Indian Industries.
8. Role of I.S.I. in Quality Control.

*Books Recommended :*

1. Foundation of Productivity Analysis: Bela Gold
2. Industrial Productivity and Economic Growth: B.B. Lal
3. Productivity and Economic Incentives: J.P. Daurison, P. Sargent, Barbara Grag.
4. Higher Productivity in Manufacturing Industries: I.L.O. Publication, 1954.
5. Raising productivity: I.I.O. Publication, 1959
6. Productivity Measurement: Concepts Vol. I, E.P.A. (O.E.C.C.) 1955
7. Terminology of Productivity: O.E.C.C., Dec., 1950.
8. Measurement of Productivity: M.M. Mehta.

9. Quality Control and Industrial Statistics: Acheson J. Duncan.
10. Quality Control: Principles, Practice and Administration by A.V. Feigenbaum.
11. Quality Control: Theory and Applications by Bertrand L. Hansen
12. Quality Control and Statistical Methods; Edward M. Schrock.
13. Modern Production Management: Elwood S. Buffa.
14. Analysis for Production Operations and Management: Edward H. Bowman and Robert B. Fetter.

*Journals recommended :*

15. N.P.C. & ISI Journals

*M. Com.*

PAPER IX : *Economic Analysis:*

*A. Micro Analysis*

1. The Economic Problem. Functions of economic system.
2. Demand analysis: Utility and indifference curve approaches—The theory of consumer behaviour—Elasticity of demand concept and its use in demand forecasting.
3. The production function—the law of diminishing returns—returns to scale: constant. increasing and decreasing least cost factor combination fixed and variable cost—short run and long run cost—Economic and Accounting Cost.
4. The Firm, analysis of revenue, Break-even analysis—Determination of the out put and the price of the firm and the industry under the conditions of pure competition, monopolistic competition, monopoly and oligopoly—price discrimination—pricing of public utilities. Weaknesses of the traditional Price Theory.
5. Factor pricing—marginal productivity theory—modern theory of rent, wages, interest and profits.

*Macro Analysis:*

6. Business cycles—theories of business cycles—the

problem of unified theory of business cycles—international aspects of trade cycle. Control of business cycles.

7. Concepts, components and measurement of national income—national income and economic welfare.
8. Elements of General Equilibrium Analysis.
9. Theory of Income and Employment: The classical view, Keynesian Theory, the consumption function, the investment function, applicability of Keynesian theory of employment in developing countries, problem of disguised unemployment.

*Book Recommended:*

1. Stonier and Hague: A Text book of Economic theory.
2. Boulding: Economic Analysis.
3. J. Robinson: Theory of Imperfect Competition.
4. Hansen: Fiscal Policy and Business Cycles.
5. Leftwich: The price System & Resource Allocation
6. Allan J. Braff: Micro Economic Analysis.
7. Dye, Moore & Holly: Economics: Principles, Problems and Perspectives.
8. Colberg, Bradford & Alt: Business Economics
9. E.E. Nemmers: Managerial Economics
10. J.M. Keynes; The General Theory of Employment, Interest & Money
11. Lipsey; An Introduction to Positive Economics.

**PAPER X : *Principles and Practice of Economic Administration.***

1. *The Concept of Economic Administration:*  
Nature, Scope, Objectives and Techniques of Economic Administration.  
Economic Administration and Constitutional Provisions in India.
2. *Economic Policies and Planning:*  
Fiscal Policy and Monetary Policies. Monetary

Policy and Reserve Bank of India, Problem of incentives and efficiency, price policy and planning, skill formation, industrial policy, instruments of trade regulations, economic controls, industrial licensing.

3. *Role of the Public Sector in India Public Vs. Private:*

Growth of public sector, problems of public sector enterprises, profit criteria, public accountability and managerial problem,

4. *Planning Organisation and Administration:*

Machinery for the formulation, implementation, supervision, coordination and evaluation of plans in India (A detailed study of planning machinery in India).

5. *Administration of Financial Resources:*

Centre and State Financial resources, the provision in the Constitution of India, the Finance Commission, the taxation policy, Administration of public debt in India, the external resources.

6. *Financial Administration of the Indian Union:*

State Governments and local authorities, Parliament and public accountability, the role of the estimate Committees, Public Accounts Committees and Comptroller and Auditor General of India.

Special Parliamentary Committee and Nationalised Industrialised the Financial control of public Corporations Government companies and other categories of public enterprises. Leakages in Financial Administration, Tax Evasion, Efficiency and economy in financial administration.

7. *Budget balancing theories:*

Capital budget, Revenue budget, Surplus & Deficit Budget. Integration of the various items on the expenditure and revenue sides of the budget.

*Books Recommended:*

1. Chanda, Ashok; Indian Administration.
2. Bhargava, R.N.; Indian Public Finance.
3. Prem Chand A.; Control of Public Expenditure in India.

4. Bhargave, R.N., the Theory and Working of Union Finance in India.
5. Kaldor, Nicholas; An Expenditure Tax.
6. Hall, C.A.; Fiscal Policy for Stable Growth.
7. Hanson, A.H.; Parliament and Public Ownership.
8. Morrison, Herbert; Government and Parliament.
9. Paranjape, H.K.; Planning Commission, A Descriptive Account.
10. Hansen, H.P.; The Process of Planning: A Study of India's Five Year Plans.
11. Reports of the Administrative Reforms Commission.
12. Gorwala, A.D.; Report on Efficient Conduct of State Enterprises in India.
13. Lokdawala, D.T.; Taxation and Plan.
14. Tandon, B.C.; Economic Planning
15. Lewis, W.A.; Principles of Economic Planning
16. Walinsky; The Planning and Execution of Economic Development (A non-technical guide for policy makers and administrators).

*M. Com.*

*PAPER XI Modern Management.*

N.B.: Candidates be required to attempt FIVE questions, selecting not more than two from each section.

*Section A: Planning Perspective:*

1. Studying Environment, Enterprise Goals. Vision of Achievement in Public and Private Agencies, Orientation towards Economic Growth, Expansion and Diversification.
2. Appraising Strengths and Weaknesses in Functional Areas of Modern Management.  
(a) Technical (Production)      (b) Marketing  
(c) Financial and      (d) Personnel (Managerial).
3. Development Allocation and Optimum Utilization of Resources (Inputs): Managerial; Manpower; Material; Monetary; Machines; and Methods.

*Section B. Performance Prespective:*

4. Organisation System: Communication Process, Pattern of Supervision, Informal and Formal Organisation; Line, Staff and Functional Authority; Managerial Decentralisation, Divisionalisation, Delegation of Authority and Span of Control; Growth of General Management Cadre as against Functional Specialists.
5. Measurement/Incentive System:—Emphasis on Efficacy and Results rather than mere activity. Standards of performance, Appraisal, Comparative Approach, Criteria of Effectiveness of Financial and Non-Financial Incentives. System of Punishments Rewards.
6. Behavioural System: Morale, Motivation and Productivity, Self-actualization, Feed Back, Participation and Recognition; Human Relations Approach; Styles of Leadership and Direction; Organisational Mission and Norms of objectivity versus Personal Values, Preferences and Prejudices. The Acceptance Theory of Decision-making.

*Section C Techniques:*

7. Elementary Study of Mathematical Tools:—Linear Programming, Queuing Theory, Game Theory, and Inventory Control; Planning, Evaluation and Review Techniques (PERT).
8. Decision-making through non-mathematical techniques: Heuristic Programming; Rule-of-Thumb judgment, Intuition, Creativity and Learning.
9. Organisation and Methods (O & M) Approach with special reference to management of non-profit-making organisations.
10. Management Thought and Techniques: A review starting from F.W. Taylor and Henri Foyal. Comparative Study of important School of Thought in Modern Management.

*Books Recommended:*

1. Ray, A. Killian; Managing by Design...For Maximum Executive Effectiveness (American Management Association, 1968).
2. Harold Koontz(Ed.); Toward a Unified Theory of Management.

3. Theo Haimann; Professional Management (Theory & Practice)
4. Bertram M. Gross; Organisations and their Managing.
5. Harold Koontz and Cyril O'donell; Principles of Management (An Analysis of Managerial Functions).
6. Donald M. Bowman and Francis M. Fillerup; Management: Organisation and Planning.
7. E.M. Hugh-Jones; Human Relations and Modern Management.
8. Richard A. Johnson, Fremont E. Kast and James E. Rosenzweig; The Theory and Management of Systems.
9. Rosemary Stewart; The Reality of Management.
10. James D. Mooney; The Principles of Organisation.
11. E.W. Taylor; Principles of Scientific Management.
12. Henri Fayol; General and Industrial Management.
13. Adrian M.M. Donough; Information Economics and Management Systems.
14. Peter F. Drucker; The Effective Executive.
15. Peter F. Drucker; Managing for Results.
16. Hicksi The Management of Organisations.
17. Richard I. Levin and Rudoldm. P. Lamone; Quantitative Disciplines in Management Decisions.
18. Arnold Kaufmann; Methods and Models of Operations Research.
19. Heady, Linear Programming,
20. Lawrence A. Appleyt Values in Management (American Management Association, 1969).

Paper XII : *Quantitative Techniques.*

1. The role of quantitative techniques in business and industry.
2. Study of important business ratios as an aid to analysis.

3. The concept of an Index number-Computation of index numbers, their uses and problems.
4. Time series analysis for long and short term forecasting & Planning :

A study of different methods of analysing secular trend, fitting and projecting trend curves; measuring seasonal variations and cyclical fluctuations.

5. Correlation and regression analysis; its importance and applications to business.
6. Interpolation, different methods with their limitations.
7. Simple probability problems, the role of sampling theory and Monte-Carlo methods in business decisions.
8. Survey Techniques : Research methodology and variance analysis.
9. System approach to Management and Operations Research (introductory study with simple problems.)
  - (a) Mathematical Programming—Linear Programming, Dynamic Decision-making criteria, Distribution Methods, Optimal Assignment, Programming for quality and reliability, Programming and System Management, Graphic and Simplex Method.
  - (b) Inventory Planning.
  - (c) Queuing (Waiting Line) Theory.
  - (d) Theory of Games.

#### *References :*

1. Fundamentat Statistics for Business and economics by John Neter and William Wasserman.
2. Applied General Statistics by Croxton and Cowden.
3. Elementary business and Economic Statistics by Tuttle.
4. New techniques for management decision-making by Franklin A. Lindsay.
5. Norbert Lloyd Enrick, Management Planning (A System Approach).



6. Seymour Tilles, The Manager's Job: A System approach, Harvard Business Review, Jan. & Feb., 1963.
7. Charles L. Hinkle and Alfred A. Kuchn, Heuristic Models : Mapping the maze for management, California Management Review, January 1967.
8. Jerome D. Wiest, Heuristic Programmes for decision making, Harvard Business Review, Sept.-Oct. 1966.
9. Peter F. Drucker, The New Management Tools—and what the Manager can expect of them (General Management Series No. 176, Controls and Techniques for better management AMA, 1955).
10. Peter P. Schoderbek. (Ed.) Management Systems (John Willey, 1967.)

### Paper XIII *Administration of Public Enterprises*

Courses of study and Reference same as for Paper VIII "Administration of Public Enterprise" printed in the 1970 Edition of the Syllabus on pages 42-45 with the following additions :—

#### *References :*

1. Administrative Reforms Commission : Report of study team on Public Sector Undertaking, June 1967.
2. Laxmi Narain : Public Enterprises in India, 1967.
3. Elmer E. Smead : Governmental Promotion and Regulation of Business (Appleton-Century-Crofts, Meredith Corporation, New York, 1969).
4. T.V.A. 1969 (in place of TVA 1958, 25th Anniversary Year, Washington, 1959).

#### *Journals :*

1. Lok Udyog (Public Enterprise).
2. Management in Government.
3. Indian Journal of Public Administration.
4. Public Administration (Royal Institute, U.K.)
5. Annuals of Cooperative and Public Enterprise.

*M.Com**Paper XIV : Industrial Economics :*

(The paper is to be studied with special reference to India).

1. Rationale & Industrialisation : Pattern, process and implications of industrialisation; foundations of modern industry; Natural, human and economic resources.
2. Size and location of industries.
3. Growth & forms of industrial combinations, Monopolies Commission, Monopolies and Restrictive Trade Practices Act. State and concentration of economic power in India.
4. State & Industry.
5. Development finance & term lending institutions.
6. Management problems of industrial enterprises both in the public sector and private sector.
7. Labour problems : Industrial relations, trade unionism, personnel Management, wages & fringe benefits & Labour Legislation.
8. Industrial Productivity.
9. Foreign aid and industrial growth.
10. Industrial growth and planning in India.
11. Appraisal of Industrial economy of Rajasthan.

*Books Recommended :*

1. Industry & State by P.S. Florence.
2. Growth of Industrial Economics by W.G. Hoffman.
3. Location of Economic Activity by E.M. Hoover.
4. Theory of Economic Growth by W.A. Lewis.
5. Industrial Change in India by G. Rosen.
6. Five Year Plans.
7. Reports of various Commissions and Committees.
8. Changing structure of Industrial Finance in India by L.C. Gupta.

9. Industrial Organisation in India by P.S. Loknathan.
10. Labour Problems in Indian Industry by V.V. Giri.
11. The Structure of the Corporate Private Sector a study of Concentration industry and control by R.K. Hazari.
12. Report of the Monopolies Commission (India).
13. Reports on Industrial Licensing—Hazari Report & Dutt Report.
14. Industrial Economy of a Developing region—A case study of Rajasthan in relation to other States of India by H.M. Mathur.

*M.Com.*

Paper XV—*Transport Economics* :

1. Significance and Development of Transport

(A) Introduction : Transport, A Public Utility Service: Economic Significance of Transport : Transport and Production : Transport and Exchange: Transport and Distribution: Transport and Consumption: Transport and Territorial Division of Labour: Transport and Competition. Transport and Land Utilization: Transport and Price Stabilisation: Transport and utility : Transport and seall prouction Transport and Agriculture: Transport and Industrial Development.

(B) Political Significance of Transport

(C) Social Significance of Transport.

Drawback of Transport :

(a) Elimination of Cottage Scale Production.

(b) Restrictions on International Transport Facilities.

(c) Loss of Distinguishing Characteristics.

(d) Mass Destruction

(e) Concentration of Population.

Development of Transport : Before Industrial Revolution; Industrial Revolution and other kinds of Transport:

(a) Land Transport; Human Porter; Animal Transport; Road Transport; Railway Transport; Continental Railways.

(b) Water Transport; Canals; Lakes; Ocean Transport.

(c) Air Transport

## 2. Railway Transport

Analysis of Railway Expenditure; Railway Competition; Combination & Monopoly; Railways and the Laws of Productivity; Determination of Railways Rates and Fares; Classification of Goods; State Regulation and Ownership of Railways; Railways in other Countries; Railway Development in India : 1844-1947-1947 upto date. Zonal Regrouping of Railways; Railways Finance in India; Railways Administration in India; Railway Rates and Fares in India; Railway Problems in India.

## 3. Road Transport

Road Development in other Countries; Road Development in India; Administration and Financing of Roads in India; Urban and Rural Transport in India; Motor Transport in India; Nationalization of Road Transport; Rates and Fares in Road Transport.

## 4. Water Transport

Introduction: Advantages of Water Transport; Drawbacks of Water Transport; Development of Water Transport; Development of Shipping; Competition in Shipping; Ocean Rates and Fares; Indian Shipping : Up to 1947 since 1947.

## 5. Air Transport

Development of Air Transport; Air Transport in India; (Before Nationalization); Air Transport in India (After Nationalization.)

## 6. Transport Co-ordination

Competition in Transport; Concept of Transport Co-ordination; Transport Co-ordination in India.

## 7. Transportation Model

Select Bibliography

1. D.P. Locklin : The Economics of Transportation
2. W.M. Acworth : The Elements of Railway Economics.

3. R.D. Tewari: Railways in Mordern India.
4. Amba Prasad : Indian Railways
5. K.K. Saksena : Indian Railways Problems & Prospects.
6. V.V. Ramanadham : Road Transport in India.
7. Radhakumud Mukherji : Indian Shipping.
8. M.R. Dhekny : Air Transport in India.
9. M.K. Ghosh : Transport Development and Coordination.
10. S.K. Guha : Transport Coordination.
11. Sanyal : Development of Indian Railways.
12. Fenelon : Economics of Road Transport.
13. Hoji : Economics of Shipping.
14. Ashok Mehta : Indian Shipping.
15. Fenelom : Transport Coordination.
16. Fredricks : Commercial Air Transportation.
17. Reports of the Estimates Committee; Public Accounts Committee; Committee on Public Undertakings and other Reports in the field of Transport.

#### Paper XVI

##### *Cooperation and Agricultural Organization*

(This paper will be studied with special reference to farm management aspects).

1. Field of Agricultural Organization :  
Definition, Relation to ther fields of study; Contribution of agriculture in developing countries in the form-of product, factor and market contribution; Role in the assisted take-off; Role of Agriculture in the developed countries.
2. Basic principles of agricultural organisation with special reference to farm management aspects :  
Principles of diminishing returns; Marginal productivity, Constant productivity of resources; Possibilities of increasing Returns; Cost principles, Principles of Substitution in choice of practices; cost relationship;

Equi-marginal return principle, Principles of combining enterprises; Production function as a tool in farm management.

3. Farm Production and Inputs Supplying Organisation :

Role of crucial inputs like irrigation, exotic seeds, fertilizer and manure and plant protection measures in the context of changed strategy of agricultural development, Role of Custom service, Reasons of retested adoption Efficacy of existing organisation with regard to supplying crucial inputs, cooperative input supplying organisation as an alternative.

4. Farm Credit :

Positive approach to the problem of farm credits, Decision to use credit, Equity principle in relation to borrowing, Long run and Short run financial programme, Bases for credit, Sources for credit, Role of institutional vis-à-vis cooperative organisations in the field of farm credit.

5. Economics of Farm Labour Use :

Factors affecting labour efficiency in agriculture with special reference to availability of surplus labour in developing countries, Farm work simplification, Labour saving in field operations, Labour efficiency and capital substitution, Labour productivity in relation to capital, Cooperative farming as a tool for absorbing surplus available labour.

6. Farm Prices :

Nature of farm supply response; Relationship between agricultural prices and output, Supply functions for agricultural produce factors affecting farm income, farm prices and food consumption.

7. Marketing of Agricultural Products :

Needs for efficient organisation with special reference to imperfect competitiveness of agricultural industries essentials of marketing in agriculture, role of middleman, cooperative organisation as panacea of existing evils in the marketing structure.

8. Agricultural Planning and Agricultural Policy in India :

Detailed study of agricultural development in the context of Green Revolution, present structure of input supplying and marketing organisations, Organisational

defects in the existing machinery, suggested changes in the organisations (both in cooperative and institutional spheres) in the context of recent governmental agricultural policies.

9. Theory of Cooperation :

General aims, Basic principles, Relative and Comparative study of different economic organisations, Cooperation as a balancing factor between public and private sector. Role of cooperation in the context of developing agriculture.

10. Management of Cooperatives :

The Cooperative setting. Role of the Board of Directors Functions of the Board, aspects of the personnel policy, Democratic control and trading policy, duties and position of the Manager and staff training.

11. Cooperation and Plans in India :

Detailed review of developments in the Cooperative sector during each plan period with special reference the agricultural development and envisaged growth policies.

*References :*

1. Schultz T.W. : Economic Organisation of Agriculture.
2. Schultz T.W. Transforming traditional agriculture.
3. Heady E.O. : Economics of Agricultural production and resource use.
4. Heady E.O. : Agricultural, Production Functions.
5. Heady & Jensen : Farm Management Economics.
6. Effersen : Principles of Farm Management.
7. Directorate of Economics & Statistics; Ministry of Food & Agriculture, Government of India : Studies in Economics of Farm Management of different States of India.
8. Desai B.M. Desai M.D. The New Strategy of Agricultural Development in Operation.
9. Schultz T.W. Production and Welfare of Agriculture.
10. Schilkete R.W. Agricultural Policy.

11. Johnson D. Gale : Forward prices for agriculture.
12. Halerad, Harold : Contemporary reading in agricultural economics (portion relating to production functions in farm management).
13. Government of India : Report on Cooperative Farming.
14. Rajeshwar Dayal : India's New Food Strategy.
15. Jain S. C. Agricultural Planning in Developing Countries.
16. Shukla Tara : Economics of Underdeveloped Agriculture.
17. Pal B.N. : Principles of Agriculture Economy.
18. Mosher Arthur T. : Getting agriculture Economics.
19. Kulkarni K.R. Theory and Practice of Cooperation in India and Abroad.
20. Govt. of India : Report of Committee on Cooperation.
21. Reserve Bank of India : Rural Credit Follow-up Surveys.
22. Stephenson : Management in Cooperative Society.

#### Paper XVII.

##### *International Trade and Commercial Interlicence*

1. Meaning and significance of International Trade as distinguished from inter-regional and internal trade. Theories of International trade. Mercantilism and the classical schools of thought. The theory of Comparative Costs. International Trade as special case of general exchange. Recent developments in International Trade Theory. Terms of Trade and the gains from trade.
2. International Factor Movement : Labour and capital movements. Foreign aid programmes. Price changes income effects and the multiplier.
3. Theory of protection, customs unions, quotas and tariffs. Bilateralism in international trade. Fiscal policy and trade control. European Common Market, GATE UNCTAD, International Commodity Agreements.
4. Theories of Exchange Rate Determination. Their relationship with international trade. Balance of trade,



balance of indebtedness and balance of payments. Devaluation and exchange fluctuations in relation to international trade.

5. The International Monetary Fund, World Bank and its affiliates. The Problems of international Liquidity. International monetary reform.
6. Current international economics problems.
7. India's foreign trade and commercial policy since 1947. India's balance of payments-recent trends. Foreign aid to India.
8. Commercial Intelligence : Trade Commissioners-Enquiries, fairs and surveys. International Exhibitions. Sources of foreign trade statistics in India-method of collection with special reference to coding system.

*Books Recommended :*

1. Kindelberger : International Economics.
2. Ellsworth, P.T. : The International Economy.
3. Ellsworth, P.T. : International Economics.
4. Snider, Delbert A : Introduction to International Economics.
5. Ohlin, Bertil : Inter-regional and International trade.
6. Harberier, Gotfried : The Theory of International Trade.
7. Tinbergen : International Economic Integration.
8. Myrdal, Gunnar : An International Economy-Problems and Prospects
9. Man Mohan Singh : India's Export Trends and the prospects for self-sustained Growth.
10. Harrod, R.F. : International Economics.
11. Enke and Salera : International Economics.
12. Thomas : Principles and Arithmetic for Foreign Exchange.
13. Meade : Balance of payments.
14. Reserve Bank of India : Reports on Currency and Finance.
15. Gupta, K.R. : International Economics.

16. Arora, R.S. : A Practical Guide to the foreign Trade of India.

Paper—XVIII *Marketing Strategy and Internal Trade :*

1. *The Marketing Environments :* The marketing concept; The marketing mix, Relation of marketing-mix to objective, resources and exogenous forces; Economic backgrounds for marketing; Role of marketing in economy; The nature and size of market; The peculiarities of consumer behaviour; The impact of competition.
2. *Marketing Planning :* Marketing strategy Product Planning; Pricing Cost and dynamics of demand, Break even points as an aid to pricing; Channels of distribution, cooperation with distributive channels, recent trends in distributive outlets in India; Marketing logistics including the Central and State Warehousing Corporations; Packaging and Branding (The Trade and Merchandise Marks Act., 1958); Advertising Strategy and evaluation, Growth of Advertising in India; Promotion techniques and practices.
3. *Marketing Techniques :* Quantitative orientation; Purpose and Scope of Marketing Research, Planning and Marketing Research procedure; Finance for marketing executives; The Systems approach to marketing; Quantitative methods in marketing; sales forecasting.
4. *Marketing Organisation :* Organisation of Head Office : Field Organisation and Organisation of Service; Coordination; Communication; Control.
5. *Marketing Action :* Sales management, Role of salesmanship in modern India, Types of selling, Process of selling Use of psychological techniques, Handling different types of customers, Role-playing; Controlling and motivating salesman; Marketing of Industrial products; Rural marketing.
6. *Company Image :* Public Relations and Corporate image, Emergence of consumer bodies (The Consumer-Association of India, The Consumer Guidance Society, The Consumer Council of India). The fair Trade Practices Association; Government regulation through legislation (Sale of Goods Act., 1930, Indian Standards Institution Certification

Marks-Act 1952, The Drugs and Magic Remedies-Objectionable Advertisements-Act 1954, Prevention of Food Adulteration Act 1954, The Essential Commodities Act 1955, The Monopolies and Restrictive Trade Practices Act 1969).

7. Public Corporations : The Food Corporation of India; The Cotton Corporation.

#### *References :*

1. Britt, S.H. and Boyd Jr. H.W. (Eds.); Marketing Management and Administrative Action.
2. Davar, R.S.; Modern Marketing Management in the Indian Context.
3. Johnson, L.K.; Sales and Marketing Management
4. Kelly, E.J. and Lazer, W. (Eds.); Managerial Marketing—Perspectives and Viewpoints.
5. Kotler, Philip; Marketing Management.
6. Neelamagham, S. (Ed.); Marketing Management & the Indian Economy.
7. Nystrom, P.H. (Ed.); Marketing Hand Book.
8. Rodger, L.W.; Marketing in a Competitive Economy.
9. Stanton, W.J.; Fundamentals of Marketing.
10. Still, R.R. and Cundiff, E.W.; Sales Management.

#### *Journals.*

1. Journal of Marketing, Pennsylvania (U.S.A.)
2. Indian Management.
3. Marketing and Economic Research, New Delhi.
4. The Indian Journal of Commerce.
5. Industrial Times, Bombay.

#### *Paper XIX : Foreign Exchange and Commercial Policy.*

##### A Foreign Exchange :

- (i) International Transactions and payments.
- (ii) Determination of Rate of Exchange.
- (iii) Foreign Exchange Transactions, terminology and Quotation.

- (iv) Documents used in Foreign Trade Finance.
- (v) Collection and negotiation of foreign bills.
- (vi) Elimination of Foreign Exchange Risks
  - Forward Exchange.
  - Credit Insurance.
- (vii) Exchange Control.

#### B. Commercial Policy :

- (i) Free Trade and protection.
- (ii) Kinds and effects of Tariffs.
- (iii) Quotas, Dumping and State Trading.
- (iv) The Theory of Customs Unions.
- (v) Trade Blocks viz. E.C.M.; E.F.T.A. and L.A.-F.T.A.

*N.B. :* The Study should be based on Indian background.

#### *Books Recommended :*

1. Paul Einzig : The Theory of Foreign Exchange.
2. Paul Einzig : Forward Exchange .
3. Crump : A,B and C of Foreign Exchange.
4. Walton : Foreign Trade and Foreign Exchange.
5. Allen and Allen : Foreign Trade and Foreign Exchange.
6. G.S. Lall : Finance of Foreign Trade and Foreign Exchange.
7. Ellsworth, P.T.; The International Economy.
8. Bhagwati, J. : International Trade (Penguin)
9. Kindleberger : International Economics.
10. Manmohan Singh : India's Export Prospects for Self-sustained Growth.
11. Killough and Killough : International Economics.
12. Reserve Bank of India : Foreign Exchange Manual.

M.Com.

#### Paper XX : Export Teaching Techniques and Strategy.

1. Economic Development and World Trade, Role of exports in economic Development.

2. The World Market : Foreign Trading System in (i) U.S.A. and Canada (ii) E.C.M. (iii) East European Countries (iv) E.F.T.A. and E.C.A.F.E. countries (with special reference to tariff-system),
3. (i) Arrangements for Trade in Primary Products; International Commodity Agreements, Methods of Stabilizing Export earnings of Primary Products, Methods of increasing earnings from export of Primary Products (ii) Trade Preferences for Manufactured goods in Developed countries and Developing Countries. The competitive efficiency of Indian goods.
4. *Organizing for exports* : export staff, Basic export unit, Advanced export unit, office-routine, the Ideal export set-up. The organisations connected with export trade in India.
5. *The Distribution System* : Forwarding agents, the functions of despatch in the Processing of an export order, the despatch set-up, order flow charts, shipping by sea, main documents, Shipping by Air, Air Freight costings, the progress and Documentation of an export order, Landed costs, Packing for exports.
6. *Methods of selling overseas* : Selling to Export markets through Channels Overseas, Dealing direct with local customers, Decision for the method of distribution.
7. *Payment and Finance* : Making an export offer, Credit worthiness, export and import licences, conditions of sale, export terms of delivery, Methods of Payment, Insurance, Marine Insurance, Air Freight Insurance, Credit Finance, for exports : Sources of export Finance in India, exchange control regulations in India.
8. Export Promotion in India : The infrastructure for export promotion in India, Export Policy resolution Export Licencing Procedure in India, export incentive schemes, export documents.
9. Export Pricing, export potential surveys. (Methodology).
10. International Organisations for the promotion of trade. GATT, International Trade Centre, UNCTAD.

*Books recommended :*

1. M. Madden, Profitable Export Marketing, Newman Neame Ltd.,
2. HMSO : Board of Trade Exports Hand Book.
3. Clive M. Schithoff, The Export Trade, Stevens & Sons Ltd.
4. W.W. Syrett, The Finance of Export Trade, sir Issac Pitman & Sons.
5. Ryans and Baker, World Marketing, John Wiley and Sons Inc.
6. Henry. Deschampsneufs, Selling Overseas, Business Publications Ltd.
7. S. Evebyn Thomas, The Theory and Practice of Commerce, Cassal and Co. Ltd.
8. Horald Whitehead, The Administration of Marketing and Selling, Sir Issac Pitman & Sons Ltd.
9. GATT : Manual of Export Promotion Techniques.
10. Indian Institute of Foreign Trade, Export Pricing.
- 11, Indian Institute Foreign Trade, Export Incentives in Developed and developing Economics.
12. E.E. Pratt, Modern International Commerce.

Diploma in Co-operation Examination, 1972—  
Same as for 1971.

Diploma in Banking & Finance Examination, 1972—  
Same as for 1971.

## APPENDIX IV

(Ref:—Res. No. 12 dated 15.3.71 of Faculty of Commerce)

Minutes of the meeting of the Board of Studies in Business Administration held on 28th/29th September, 1970 at 12. noon, at the University Humanities Hall, Jaipur.

## PRESENT :

1. Shri M.L. Sharma,
2. Shri G. L. Joshi.
3. Shri C. S. Kulshreshtha.
4. Shri M. M. Gupta.
5. Dr. N. L. Hingarani.
6. Dr. R. G. Sarian (Convener)

Prof. S. M. Tiwari did not attend the meeting.

1. Under Section 24E (8) of the University of Rajasthan Act, Dr. R. G. Sarian was unanimously elected as convener of the Board studies in Business Administration.

2. Under Section 34 (4) (iv) of the University Act, the Board elected Shri M.M. Gupta as a member other than the Convener of the Board of Studies to serve on the Committee for the Selection of examiners in the subject for the year 1971.

3. After going through the reports of examiners and question papers set for the examination of 1970 the Board observed that the question papers in Type-writing should be legibly written and the examiner be instructed to do so.

4. The Board scrutinised the statements of qualification and teaching experience etc. of teachers (received from University Teaching Departments, University Colleges, affiliated institutions and other Universities) for inclusion in the revised panel of examiners for 1971 and decided to select only those as External Examiners who were either Professor/Readers or Postgraduate, Heads and only these lecturers who possesses at least 10 years experience of teaching in the subjects concerned.

5. The Board recommended the courses of study and text books in Business Administration for the various examinations as follows.

1. Pre-University Examination, 1972.—No change.
2. B.Com. (Pass) First Year Exam. of 1972. Appendix—I.
3. B.Com. (Pass) Second Year Examination of 1973. Appendix—II.
4. B.Com. (Pass) Final Yr. Examination of 1974. Appendix—III.
5. M. Com. Prev. and Final Examination of 1972. Appendix IV.
6. B.Com. (Hons.), Exams. of 1974.—No change.
7. M.B.A. examination of 1972.—Appendix V.
8. Diploma in Typewriting and short-hand examination of 1972.—Appendix VI.

6. The suggestions received from the teachers regarding Courses of study were duly considered while recommending the courses.

7. The Board considered the following suggestions of the Vice-Chancellor made by him in consultation with the Convener of the Examinations Reforms Committee :—

- A. Regarding award of Sessional marks, these may be awarded on the basis of Articulation, comprehension and Objective Tests of the Students as per details given below :—

#### *Articulation—4 marks*

Each student may be required to write atleast one essay on the subject each term. This may be assessed by 2 independent teachers independently and marks recorded. Marks may be declared publicly and if any student feels aggrieved he may be explained why that particular award given.

#### *Comprehension—3 marks*

A test may be conducted each term to examine whether the students have picked up



the appropriate expression, and have understood the subject matter.

*Objective Test—3 marks*

Under this category marking may be done but the marks may not be shown to the candidates. But the solution may be written by the teacher and posted on the notice board so that the students may know the correct answers. If this rational basis is adopted there is a change of increasing the quantum of internal assessment.

B. As regards syllabus at the Post-graduate level I suggest that :—

- (i) a list of full and half courses may be prepared according to the availability of teaching competence.
- (ii) it may be possible for a student to offer two full courses as a topic to give specialisation in that topic. Such a student would prepare himself for research in this topic.
- (iii) a student who wishes to learn the subject for becoming a teacher he may offer 4 half courses covering a variety of topics to have an extensive view of the subject. In fact the students may have to choose one full and half two courses.

C. For very few bright students it may be suggested that they may be encouraged to do some self study on pre-assigned topics which are not included in their curriculum and they may be assessed entirely on that as far as sessional marks are concerned.

The Board did not agree with suggestion 'A' and resolved that the existing practice be continued. As regards suggestions B & C, the Board observed that this was being done at M.B.A. stage though in a modified form.

8. It was reported to the Board that the Academic Council vide its Res. No. 35 dated 21-4-70 accepted the following draft re-resolution proposed by Dr Dayakrishna, Chairman, Examination Reforms committee vide his letter

No.Acd/C/1082 dated 17-4-70 as a result of discussions in the meeting of the Examination Reform Committee held on 17th April, 1970 :—

“Resolved that in the interest of raising standards of teaching and examinations and award of degrees the Board of Studies may prepare alternative schemes of Courses and Examinations in their respective subjects to be implemented as early as possible.”

The Board observed that this was being done for M.B.A. Examinations.

9. The Board considered the following requests made by the students of the Diploma course in Cost and Works Accountancy, University School of Commerce, Jaipur., together with the remarks offered those by the Head of the Department of Accountancy and Business Statistics, University School of Commerce, Jaipur as contained in the letter No. 16-D-A.B.S. dated the 16th October, 1969 :—

*Request of the Students*

While the admission in Master of Business Administration is open to Postgraduate students, it is not understood as to why the admission is not given to the Accountancy. The Bachelors of Engineering are also admitted in this course, while we, the students of C. W. A. in spite of our studying the papers of Engineering and Mathematics are deprived from admission in Master of Bus. Admm. Course.

*Remarks of the Head of the Deptt.*

Students passing this Diploma should also be given admission to Master of Bus. Admn. viva-voce various tests etc. are counted by the Deptt. of Bus. Admn. to select candidates for this course and if a student with this post graduate Diploma is found suitable, there is no reason why he should not be given admission in M.B.A. course. The matter may be referred to the B.O.S. in Bus. Admn. for consideration or before the faculty of commerce.

Resolved to recommend that the above request be not accepted.

10. The Board was requested to consider the following complaints received against question papers from the Principals of affiliated colleges :—

- (i) Complaints dated 31st March and 1st April, 1970 against the question paper Business Method of Pre-Univ. (Com.) examination.
- (ii) Complaint dated 26th March, 1970 received from the Principal, S. S. G. Pareek College, Jaipur against the question paper steno-typing (Eng.) Paper II of Final year T.D.C. (Com.) Examination along with the remarks of the paper setter.

However, since the complaints were not made available in the meeting, Board authorised the convener to look into the same and ask the office to issue necessary instructions to the paper setters concerned.

Sd/—R.G. Sarien  
Convener.

## APPENDIX I

*1st Year T.D.C. Commerce (Principles of Business  
Administration; Business Organisation )*

There will be one paper of 3 hours duration carrying 100 marks.

1. Introduction—objects of Business (scope and meaning); Profit and service motives in business—Social responsibilities of business.
2. Types of ownership—Sole trader, partnership, company, cooperative, Public ownership—their main characteristics and merits and demerits (detailed study of each type is not required).
3. Wholesale trade and retail trade (including departmental store, multiple shops and cooperatives).
4. Methods and sources of financing business (as regards special financial institutions, a brief study of only Indian Financial institutions required).
5. Business combinations.
6. Elementary study of Life, Fire and Marine Insurance.
7. Advertising and Publicity (excluding salesmanship).
8. Organisation and State regulation of Import and Export trade.

*Books recommended :*

1. Asthana P & Upadhyaya R.B.—Vyavasayik Sangathan, Prabandh and Prashasan, Sahitya Bhawan, Agra.
2. Agrawal Ramesh Chandra—Vyavasaik Sangathan Prashashan : Navyug Sahitya Sadan Agra.

## APPENDIX II

*II Year T.D.C. (Commerce)**Business Law :*

- Indian Law :
1. Contract Act (including indemnity, guarantee, bailment and agency).
  2. Sale of goods Act and laws pertaining to
  3. Partnership
  4. Negotiable instruments and
  5. Arbitration.

*Books recommended :*

1. M.C. Shukla—Mercantile Law.
2. Mulla—Mercantile Law.
3. Davar—Mercantile Law.
4. R.C. Agrawal—Vyapar Sanniyam : Rattan Prakashan, Agra.
5. B.S. Mathur & K.B. Saxena—Vyapar Sanniyam.
6. Man Mohan Prasad—Vyapar Sanniyam.

*Labour Problems :*

1. Nature of Growth of Labour Problems.
2. Industrialisation and Growth of labour class in India.
3. Characteristics of Indian Labour class.
4. Sources of Labour supply—Labour market in India—Systems of recruitment of labour—Evaluation of Employment Exchange.
5. Absenteeism—Turnover of labour in India.
6. Productivity—Concept—Factors—Cause of low productivity and its improvement.
7. Trade Unionism—Historical background—Present pattern and problems—Recognition of trade union—worker's education in India.
8. Problems of Industrial peace—forms of industrial disputes—cause and cure and prevention of industrial

disputes in India—Tripartite consultations in industrial relations.

9. Labour welfare—concept—importance and evaluation of welfare work in India, Industrial Housing.
10. Working conditions in India—some aspects.
11. India and International labour organisation (I.L.O.)
12. Labour and Government Policy.

### *Business Communication & Salesmanship :*

#### *Section 'A'*

Meaning of Business Communication; drafting of business letters e. g. (a) employment; (b) enquiry and quotations; (c) orders; (d) trade references; (e) advice; (f) acknowledging goods and making payments; (g) complaints; (h) introduction and credit; (i) dunning or collection letters; (j) circular letters; (k) bank letters; and (l) insurance letters.

#### *Section 'B'*

Explaining market reports in simple language; share and commodity; relevant technical terms should be discussed in the class; In addition to a passage or passages given for interpretation, candidates may also be asked to explain technical terms used in the same.

#### *Section 'C'*

Salesmanship; meaning of salesmanship scope and development of salesmanship; Importance of salesmanship personal qualities of a successful salesman; Types of salesman; sales promotion; the nature and principles of sales organisation; role of sales manager.

## APPENDIX III

*III Year T.D.C. Commerce Examination 1974**Paper I Company Law and Secretarial Practice :**Section A—Company Law :*

Definition of company; kinds of a company; private company its privileges and concessions; promotion; incorporation and commencement of business of a company; memorandum of Association; articles of Association; prospectus including statement in lieu of prospectus and offer for sale. Doctrines of Ultravires and Indoor management; allotment of shares; membership of company; types of shares and rights attached thereto; board of directors; managing director and Manager; investigation; prevention of oppression and mismanagement; winding up—different modes.

*Section B—Secretarial Practice :*

Definition; position; functions; duties; liabilities; appointment and termination of the services of a Company Secretary; secretarial procedure pertaining to forfeiture of a company's shares; surrender of shares; transfer and transmission of shares; payment of dividend; principles relating to meetings; in particular; the law, conduct and procedure affecting notices of meetings; the chairman, his powers and duties; quorum, agenda papers, discussion and order in debates, motions, amendments, resolutions, previous question, closure, voting, proxies, minutes, privilege in speeches, preservation of order at meetings.

*Paper II Elements of Management :*

1. Introductory meaning, nature, scope and importance of management in modern world. The managerial revolution, Scientific management and rationalisation.
2. Historical background of management thought—origin of management thought—19th century contributions; Babbage, Watt, Owen, etc. scientific approach in management; Taylor's Philosophy, Gantt, Emerson, Gilberth, Henri Fayol etc. Human relations approach in management.
3. Functions of management: (Brief study); (1) Planning; (2) organisation; (3) Co-ordination; (4) Motivation and (5) Control.

4. Process of decision-making (elementary approach).

*Books recommended :*

1. Lundy, James F : Effective Industrial Management.
2. Brech, E.F.L. : Principles and Practices of Management (Longmans).
3. Burnhams, James: The Managerial Revolution (India U.P.).
4. Koontz, H. & O. : Principles of Management (Mc.Graw Doonel, C
5. Newman & Summer : The Process of Managment.
6. Asthana, G.P. : The Ground work of Management (Shivlal Agrawal & Co., Agra).



## APPENDIX IV

M. Com. (Prev./Final)

*Scheme as proposed by the Boaed of Studies in Business Administration :*

1. Theory and Practice of Management;
2. Managerial Economics;
3. Financial Control and Management;
4. Human Relations; and
5. Marketing Management.

Any of the following group to be offered in M. Com. Final.

1. *Cooperative Sector :*

(a) Theory and Practice of Co-operation; (b) Management of Cooperative Credit Institutions; and (c) Management of Non-Credit Institutions.

2. *Human Relations :*

(a) Personnel Management; (b) Industrial Relations; and (c) Labour Legislation and Social Security.

3. *Marketing :*

(a) Foreign Trade; (b) Market Research; and (c) Sales Management.

4. *Transport Management :*

(a) Railways; (b) Road Transport; and (c) Air, Sea and Inland transport. 5th Paper Viva-voce.

**NOTE :**

1. Out of 5 core subjects any four are to be offered in M.Com. Previous.
2. One of the elective group and the remaining paper from the core subject to be offered in M.Com Final.
3. Viva-Voce of 100 marks shall be conducted after the written examination of M.Com. Final and it will be based on prescribed reading done by the candidate in both the two years.

4. Business Survey may be allowed to a candidate who secures 55% marks in the aggregate at the M. Com. Previous Exam.
5. Business survey will be allowed in lieu of one paper relating to the field of specialisation.
6. Teaching periods of 4 hours per week will be provided in each paper including viva-voce.
7. Business Survey will be examined by 2 external examiners.

## APPENDIX IV

*Principles of Management :*

Introductory Management defined; development of management; concepts; objectives and Ethics.

The Planning Function : Fundamental concepts of planning; types of plans; criteria for evaluating plans; planning for profit; planning for sales; planning for production; management information systems, decision making.

The Organizing Function : Organisation theory, organization structure, organisational relationships organisational processes, delegation and decentralization of authority, the committee, preparing for organizational change.

The Leadership Function : Leadership patterns, communications, motivating employees, managements' first line the supervisors, organisation development and personnel planning.

The Coordination Function.

The Control Function : The basis of control, need for control, the control process, budgetary and non-budgetary control, long-range planning and control.

## APPENDIX IV

### *Personnel Management :*

1. Personnel Management-concept and scope of functions personnel department and its role.
2. Recruitment and selection of employees-procedure tools and methods of training-terms of service.
3. Administration of change-promotion-demotion-dismissal and transfer.
4. Wages-various plans of wage payment-incentive-financial-non-financial including profit sharing.
5. Job evaluation, merit rating and performance appraisal.
6. Security, physical and social both with special reference to E.S.I., E.P.F., and workmen's compensation, Maternity benefits.
7. Dealing with unions-Collective bargaining and its principles and practices.
8. Communication systems in industry.
9. Personnel administration in India.
10. Discipline in industry.

### *Labour Legislation and social security :*

Study of the main provisions of the following Acts (study of case-laws not required).

(1) Factories Act 1948, (2) Indian Trade Union Act 1927, (3) Industrial disputes Act 1947, (4) Workmens Compensation Act 1923, (5) Mines Act 1952, (6) Industrial Employment Standing order of 1946, (7) Maternity benefit Act 1961, and (8) Employees State Insurance Act 1948.

*Industrial Relations :*

(1) Labour movement, (2) Collective bargaining-industrial disputes-forms, efficiency-methods of prevention and settlement of disputes, (3) Participation in management, (4) Elements of personnel management, and (5) Recruitment, selection, training, placement and development of human resources.

## APPENDIX VI

### *Diploma in Shorthand and Typewriting :*

No change is recommended in the courses. A candidate appearing in Diploma/Certificate in Stenotyping will be allowed to appear at the Examination alongwith any either allowed to University Examination as in the case of Certificate/Diploma examination in Foreign Languages.

## APPENDIX V

One Year M.B.A. Programme Based on Semester System-  
Scheme 'A' of Examination.

*1st Semester***Papers:**

- |   |            |
|---|------------|
| 1. Managerial Economics.                            | 100 Marks. |
| 1. Financial Management and Control.                | 100 Marks. |
| 3. Human Behaviour and Organisation Theory.         | 100 Marks. |
| 4. Marketing Management.                            | 100 Marks. |
| 5. Production Management & Quantitative Techniques. | 100 Marks. |

*2nd Semester***Compulsory Papers:**

- |                               |            |
|-------------------------------|------------|
| 1. Business Policy            | 100 Marks. |
| 2. Business Society and Govt. | 100 Marks. |

**Electives:** Any one of the following consisting of two papers each of 100 Marks.

- |                      |   |
|----------------------|---|
| 1. Human Area        | (i) Personnel Management;<br>(ii) Industrial Relations.   |
| 2. Finance Area.     | (i) Business Finance;<br>(ii) Management of Financial Institutions.   |
| 3. Marketing Area.   | (i) Marketing Research;<br>(ii) Sales Management.   |
| 4. Public Enterprise | (i) Management of Public Enterprises;<br>(ii) Comparative study of public enterprises in different countries. |

- |                                       |            |
|---------------------------------------|------------|
| <b>WAC:</b> Written Analysis of cases | 100 Marks. |
| (Analysis of large cases.             | 40 Marks.  |
| Analysis of Short cases.              | 30 Marks.  |
| Case writing.)                        | 30 Marks.  |
| <b>Viva-voce</b> and project report   | 100 Marks. |

Marks of Viva-voce and project report will be divided as follows :

- (i) Project Report—40 Marks, out of which 10 marks would be assigned to the confidential report given by the officer incharge of the organisation where the candidates will undergo training.
- (ii) Viva-Voce —50 Marks.
- (iii) Tour-Report —10 Marks. (Each candidate will be required to submit a report on his tour)

Note : Project report, Tour report and Viva-Voce will be examined by one External and one Internal (Prof. and Head) Examiners.

### *Scheme 'B'*

The number of papers and course contents will be the same as in one year M.B.A. Programme based on Semester System Scheme 'A', except that examination in these papers will be held at the end of the academic year and Internal Assessment will be 30 Marks out of 100 Marks assigned to each paper.

### **Norms for Internal Assessment:**

Each candidate will be required to (i) Submit home assignment in the form of two long reports and 2 short reports based on long and short cases; (ii) Participation in class discussion and weekly M.B.A. Seminars and (iii) Class and other tests (two in each paper)

Note : Detailed to be worked out by the Head of the Department.

### **I. Managerial Economics :**

1. Nature and scope of managerial economics. The theory of Decision making, The business firm and its objectives; Profit—its nature and measurement; Profit Planning and control; Five fundamental concepts and their application; Macro-Economics) out line)
2. Cost Analysis: Cost concepts and classification, accounting cost and economic cost, the production



functions and their managerial uses Break-even charts, confrontation of the Linear (Breakeven) and Theoretical models.

3. Demand Analysis and Forecasting: Some basic concepts, types of elasticity of demand and their application, nature and scope of demand forecasting, forecasting methods.
4. Pricing Practices and Policies: The theory of price from the view point of the individual firm under different market situations, Incremental reasoning in pricing, the price decision and its method of expression, the dynamic and tactical aspects of Pricing decisions.
5. Capital Budgeting: Steps in capital Budgeting, methods of evaluating investments, shortcuts in evaluating and ranking investments the cost of capital.
6. Risk and Uncertainty: Approaches to uncertainty: Economics and probability analysis, inventory control models, a Bidding model.
7. Some basic tools and their application (Elementary), The compound interest formulas and their application, simple derivatives, Line Programming, the simplex, input-output analysis, cost-benefit analysis, game theory.

*Text-Book :*

Haynes, Paul and Mote: Managerial Economics.

Giltis, Managerial Economics.

James L. Riggs, Economic Decision Models.

Yamane, Mathematics for Economists.

R.G.D. Allen, Mathematical Analysis for Economists.

J. Pen, Modern Economics.

11. *Financial Management & Control :*

(a) Financial Management,

1. Finance function and its organisation,
2. Basic tools of financial analysis, Fund flow statement, Techniques of Financial analysis, Forecasting fund needs.

3. Management of assets and need for funds: Inventory, Receivables Cash and Fixed assets.
4. Short-term and Intermediate-term source of funds, Bank and non bank sources and term loans.
5. Long-term capital structure: Types of securities, marketing corporate securities, underwriting and Rights issues, Debt capacity and leverage. Dividend policy and retained earnings.

(b) Financial Control:

1. Basic concepts of control, Budgetary control, Systems and methods of costing. The analysis of differences, Selected Indian Cases.

*Books :*

1. Hunt, Williams, Donaldson, Basic Business Finance.
2. Enthony: Management Accounting.
3. Solomon: Theory of Financial Management.
4. Bierman and Smidt: Capital Budgeting.

III. *Human Behaviour and Organisational Theory:*

The role of behavioural science in management. Organisation Theory formal and informal organisations; organisation structure and process. Motivation; Leadership; Communication; Bureaucracy; The Dynamics of human behaviour; Individual, social and cultural factors in the development of personality; Authority, status, power and politics; Group formation and behaviour, Individual behaviour; Interpersonal relations. Union Management; Relations; Attitudes and values, Moral.

*Books :*

Yull, Bruce : An Outline of Organisational Principles for Management (West Publishing Corporation Pty. Ltd., 1 Barrack Street Sydney 1966)

Pfffur & Sherwood: Administrative Organisation (prentice Hall)

Simon, Herbert A. : Administrative Behaviour (The Free Press, New York)

#### IV. *Marketing Management :*

1. Nature and Scope of Marketing Management; Marketing concept, Markets and Marketing environment, marketing planning, role and scope of marketing management in India.
2. Marketing Research: Importance and use in management, Types of market research, marketing research procedure, marketing research in India.
3. Product Planning: Meaning of Product planning, product policy decision—design, colour, new uses, expanding the line, simplifying the line, Brands and trade mark, packaging, product planning in India.
4. Channels of Distribution: Changes in Distribution methods, Types of channels, channel objectives and constraints, evaluating the major channel alternatives, changing channels of distribution in India.
5. Price and the market: Pricing process, Discount Policy, Price and Break even analysis.
6. Planning and Administering the market programme, Determination of the marketing expense Budget, Budget manufacturers—distributions relationships.
7. Advertising and Sales Promotion: Advertising programmes, management's problem and responsibility, objectives and problems of control, means of control, Facts needed for control system.

#### *Books :*

Marketing Management by Kotler.

Marketing Management by Pheps & Westing.

#### V. *Production Management & Quantitative Techniques:*

Production function in Business; Analytical methods in Production and operations management, cost data for decisions, production design and process, planning, computers and automation.

The design of jobs and work methods, Job design psychophysiological data, job design enlargement and participation, production standards and work measurement, plant location, lay-out of physical facilities, Integrated management of materials flow, maintenance Control of quality, Wages

and Labour cost, Control and Improvement of production cost, recent development in Production Management.

*Books Recommended :*

Buffa E.S.: Modern Production Management.

**Quantitative Techniques:**

Basic mathematics: Algebra: Linear equation and Inequalities in two-space. Graphical method of determining solution set of a set of simultaneous linear equations and inequalities in two space. Slope of straight line. Permutations and combinations, binomial exponential and logarithmic expansions. (without proof). To find the sum of a given number of terms and a given term in A.P., G.P.

Differential calculus: Definition and examples of functions. The symbolic representation of a function of any form. Limit and continuity of function Definition of the derivative of a function. Rules of differentiation for functions of one variable. Differential Coefficient of the sum product and quotient of two functions of one variable, and function of a function. Derivatives of higher order. First order and second order maximisation conditions. Functions of more than one variable partial and total differentiation of a function. Some economic applications of differential calculus.

Integral calculus: Integral as an inverse process of differentiation. Indefinite integral, definite integrals. Integrals. Integral in economic problems.

Vector & Matrix Algebra: Concept of a Row and Column vector, addition and scalar multiplication of vectors. Multiplication of vectors. Graphical representation of vectors. Matrix addition and subtraction. Matrix multiplication, transpose of a matrix, Use of matrix algebra in solving a set of simultaneous linear equations. Inverse of a Square matrix by using simple row transformations. An applications of the inverse matrix in parts requirement listing problem.

Set and functions: Sets, operations with sets ordered pair and functions.

Statistics: Simple frequency distributions, mean and standard deviation of a frequency distribution, co-efficient of co-relation and regression

## Part II

### *Quantitative Techniques :*

Linear Programming—Nature and scope, Graphical method, Simplex method, Dual Problem, Transporatation method.

Waiting time and simulation method.

A survey of probability concept.

Conditional and expected values.

Binomial, normal and poisson probability distribution.

Decision making under uncertainty.

Inventory control and uncertainty—no recording, with recording and uncertain demand.

Decision making with normal probabilities.

Game theory

Game theory in an advertising startegy situation.

### *Books :*

Quantitative Approach to management By Levin & Kirpatrick, M.C. Grawhill, 1965.

## *IInd Semester*

### *Compulsory :*

#### *I. Business Policy :*

This course intends to provide the students an awareness of the integrated nature of business problems and influence of external or environmental factors thereupon as also an opportunity to develop the knowledge and skills necessary or decision making in problems of various levels and complexity.

1. Business Policy as a field of study;
2. The concept of Corporate Strategy;
3. Establishing Company Goals—Approach to central Management Problems; Dynamic Setting of Business: Apprising the outlook for a Company; Basic company objectives.
4. Defining Major Policies—(a) Sales Policies—Products, Customers, Pricing, Sales Promotion; (b) Production and Purchasing Policies; (c) Personnel Policies—Selection and Training compensation and arrangements for work, Employee Services and Industrial Relations; (d) Financial Policies—Uses of capital, Sources of Capital, Protection of Capital and Distribution of earnings.

5. Organising for Action—Grouping activities for effective operations; Organisational Relationships; Balancing to the Organisation Structure; Board of Directors and Central Management Organisation.
6. Developing Major Resources—Executive Personnel Facilities.
7. Guiding the Execution of Plans—Short and Long Range Programming Activating; Controlling operations.
8. The Company and its social responsibilities; Relating Corporate Strategy and Moral Values.
9. Synthesis—Company Wide, Integrated approach to Central Management.
10. Executive Development!
11. Selected Indian Cases.

*Books :*

1. Business Policies and Central Management by William, H. Newman and James P. Logan (D.B. Taraporevala sons and Co. Pvt. Ltd.)
2. Business Policy by Edmund, P. Learned, C.R. Christenson and others.
3. Ansoff., H.I.—Corporate Strategy.
4. James J. Lynch Making Management; Effective selected chapters.

II. *Business, Society & Government (in India)*

Business defined, Characteristics of Business, The economic basis of business, Business occupations, Objectives of Business.

Business and Society—Business ethics, responsibilities of business to consumers, employees, Shareholders, sister-business concerns, Government and Public in general.

Forms of state intervention in Business, Concept of Welfare State. Industrial Policy, Commercial Policy, Industrial development and regulation, Industrial Licensing—process and system. Control over business through corporate Law. Control of capital issues. Control over monopolies and restrictive trade practices. The concept of public enterprise. Government assistance to industries. The concept of mixed economy, Taxation policy of Government.

1. Pauibbar, Commonsense About India.
2. Maciver and Page, Society.
3. Shekh, Social Framework of an Indian Factory.

*Electives :* Any one of the following consisting of two papers each :

I. *Human Area* \* (a) Personnel Management.

- (a) The Meaning of work, Technology and Job satisfaction, Work groups, and informal organizations, Motivating people to work General supervision, Supervisors' use of Authority, Supervisor and the group, Supervisory skills,

Hierarchy and human relations, Supervisor in the organisation, Specialization and human relations, Human problems of large organizations, personnel as a staff function, Recruitment and selection policy, Promotions and transfers. Training, Performance evaluation, Wage and Salary administration. Work Measurement and job evaluation, Incentive systems, safety and work environment, Benefit programmes, New horizons in personnel management (with special reference to India).

*Books :*

1. Strauss and Sayles, Personnel.
2. Phillippe : Principles of Personnel Management.
3. P.P. Ghosh : Hand Book of Personnel Administration in India.

(b) Industrial Relations :

Meaning and concepts of Industrial relations and its significance. Union and Management relations, Social environment, Union and Management relations related to Bargaining, Types of collective bargaining relations, Disputes, conflicts and settlements—State Labour Policy, Scope and implications of collective bargaining, Pattern and problems of trade Union in India.

*Books :*

1. Moon, W.E. Industrial Relations and Social Orders.

2. Davis K. Human Relations at work, The Dynamics of Organisational Behaviour.
3. Pancker S.D Industrial Peace in India.
4. Myers C. Industrial Relations in India.

## II. Finance Area :

### (a) *Business Finance* :

- (i) Need for funds in modern business, The working capital, Importance and adequacy, profitability and solvency, Ratio tests of working capital.
- (ii) Sources of Funds : Loan equity ration : Loan Vs. Equity and preferred stock.
- (iii) The use of funds : Inventory, cash and near cash. floating assets Fixed assets.
- (iv) Capital Budgeting and cost of Capital : The annual Capital budget, its composition, investment and return, the payback test profitability tests.—Cost of loan, preferred stock, equity, retained earnings and depreciation, varying risks and capital costs; non-financial considerations.
- (v) Profit planning : Profit objectives, earnings and expense analysis, analysis of projected earnings, non-operating and irregular sources of earnings, breakeven analysis.
- (vi) Finance and Public Policy.

### *Books :*

1. Corporate Finance and Policy by Guthmann and Dougall.
2. Basic Business Finance by Hunt, William and Donaldson.

*Note* : The study should be done with reference to India and Indian cases should be discussed.

### (b) Management of Financial Institutions :

Concept of money, capital and assets of Financial institutions; Structure of money and



capital markets; Money market instruments and their role in finance.

Commercial banking Policy and credit creation; Bank portfolio management; Fashioning of the terms and conditions of loans problem Central Banking. Policies in a developing Economy.

Development Banking :—Characteristics, role of specialised institutions in development finance.—A study of development banking in India.

Financial Institutions and state Policy :—The role of public sector banking in India—Recent Trends.

*Books :*

1. Basic Business Finance by Hunt William, and Donaldson.
2. Development Banking in India (Theory and Practice of) By S.K. Basu.
3. Current Journals and papers.

*Note :* A number of case studies from India should be included.

III. *Marketing Area :*

(a) Market Research :

Introduction to marketing Research; Research Strategy and Design; Marketing Research procedures; Introduction to sampling; Application of sampling theory; Data collection and field force, Analysis of data collected, Research report, followup, and evaluation of Research process, Motivation research, Advertising research, Product Research, Sales control Research, Sales control.

(b) Sales Management :

Nature and scope of Sales Management. Functions of the Sales Manager.

Production planning, Importance of product policies, quality, design, brands and trade, marketing, packaging, service policies. Market

Analysis : consumer behaviour sales analysis, motivation, determination of sales territories, sales forecasting.

Planning and outlets : selecting channels of distribution, various channels of distribution.

Pricing process, discount policy, price and break even analysis.

Planning and Administering the Sales programme Budget.

Role of Advertisment in Sales Management.

Problems and control. Problems of export marketing.

#### *Books :*

1. Tosdal, H.R. : Problems in Sales Management.
2. Gupta, A.R. : Techniques of Sales Management.
3. Pheleps and Westing : Marketing Management.

#### *IV. Public Enterprise :*

##### *(a) Management of Public Enterprises :*

Role of Government in various stages of economic growth, control of monopolies, State Trading.

The Socio-economic role of public ownership in developed and developing economies.

Pattern and management of public enterprises, financial administration, regulation and control of public enterprises and their problems. Price output and profit policy.

Personnel administration of Public enterprises, training and education.

##### *(b) Comparative study of selected Public Enterprises, in different countries.*

Industrial Policy of the Government of India, Evolution and growth of public enterprises in the country.

Analytical study of public enterprises in the fire of Insurance, transport, irrigation, banking and other. A comparative evaluation of public enterprises in India, U.K., U.S.A. and the U.S.S.R.

*Books :—*

- |                      |   |
|----------------------|---|
| 1. Hanseri, A.H.     | 1. Public Enterprises and Economic Development. |
|                      | 2. Managerial Problems in Public Enterprises.   |
| 2. Khera, S.S. :     | 1. Government in Business.                      |
| 3. Om Prakash:       | 1. Theory and Working of State Corporations.    |
| 4. Ramanadham V.V. : | Control of Public Enterprises.                  |

## APPENDIX V

*Ref : Res. No. 21 I D of the Faculty of Commerce.*

Syllabus for II Year Examination 1970

Elective Subject

*Quantitative methods and their Application.*

1. Statistical Organisation in India with special reference to Rajasthan.
2. Methods followed in conducting census of Population in India.
3. Birth, Death and Reproduction Rates.
4. Nature of Agriculture, Production, Trade and Price Statistics in India and Techniques used in their Collection.
5. Sampling : Meaning, Sampling and Non-Sampling Errors, Sampling Techniques, Preparation of Questionnaires.
6. Budgetary Control, Statistical, Quality Control.
7. Interpolation. Newton and Lagrange's methods.
8. Index Numbers.
9. Algebra.

MINUTES OF THE MEETING OF THE FACULTY  
OF ENGINEERING AND TECHNOLOGY  
HELD ON 24TH MARCH AT 12.00 NOON  
AND OF THE ADJOURNED MEETING  
HELD ON 31ST MARCH, 1971 AT  
10 A.M. IN THE UNIVERSITY  
OFFICE, JAIPUR.

Present

- Prof. D. Kumar, Dean      (*In the Chair*)
2. Prof. R.M. Advani
  3. Prof. R.S. Saxena
  4. Prof. G.S. Pandit
  5. Prof. C.B. Rathie
  5. Prof. V.L. Talekar
  7. Prof. B. Ravindranath
  8. Prof. M.M. Dandekar
  9. Prof. K.S. Shah
  10. Prof. A.V. Ramanujam
  11. Shri G.R. Rao
  12. Prof. M.L. Mathur

Note : All members were present on both the days except that Prof. V.L. Talekar could not attend the meeting held on the 24th March, 1971 and Prof. R.M. Advani expressed his inability to attend the meeting held on the 31st March, 1971.

1. The faculty took up for confirmation the minutes of its special meeting held on 16/17th April, 1970 and after considering a letter dated 23rd April, 1970 from Prof. V.L. Talekar

confirmed the aforesaid minutes with a note of dissent of Prof. Talekar (*vide Appendix 'A'*).

2. The faculty considered the recommendations of the Board of Studies in Engineering and Tech. made at its ordinary meeting held on 18th Nov., 1970 (*vide Appendix 'B'*

*Resolved to recommend* that the aforesaid recommendations of the Board of Studies be accepted with the following modifications/observations :

I. *Reference : Recommendations No. 4 (a) :*

See Resolution No. 12 of these minutes.

II. *Reference : Recommendations No. 5 (a) (b) and (c) :*

These recommendations be accepted and implemented with effect from the examinations of 1972.

III. *Reference : Recommendation No. 5 (d) :*

The final B.E. examination in 'Practical Training Reports' be conducted w.e.f. 1972 examination with separate Boards of Examiners in each branch of Engineering (Civil Mechanical, Electrical and Metallurgical Engg.) consisting of the following members :—

(i) Two internal examiners per branch.

(ii) One external examiner per branch.

The Principal of M.R. Engineering College, Jaipur shall be the ex-officio Chairman as in other practical examinations. Remuneration for 'Practical Training Reports' be paid at the rate of Rs. 3.80 per candidate per examiner Adequate remuneration be also paid to the ex-officio Chairman/members of the Boards of Practical and sessional examinations in Engineering and Technology.

*IV. Reference : Recommendations Nos. 13 and 14 :*

See Resolution No. 5 (vii) of these minutes.

3. Prof A.V. Ramanujam requested the Dean in the meeting held on the 24th March, 1971 that since detailed scheme of working and syllabi of the part examination system for B.E. and of Post-graduate Diploma Courses were received only two days before the meeting, consideration of the recommendations of the special meeting of the Board of Studies held on the 3rd March, 1971 be postponed to the next meeting of the faculty. After considerable discussion it was decided that after considering other items on the agenda, the meeting be adjourned for 31st March, 1971 and the recommendation of the special meeting of the Board of Studies dated 3rd March, 1971 regarding Part Examination Scheme etc. be considered on that day. The faculty also decided that in order to avoid such adjournments in future, the dates of the meetings of the Board of Studies and the faculty be so fixed that there is adequate time to prepare the minutes of the meetings of the Board of Studies and circulate them to the members of the faculty in good time for their considerations.

4. The Faculty considered a letter from Prof. R.M Advani, Convener of the Board of Studies in Engg. and Tech. requesting that Resolution No. 1 dated 3rd March, 1971 of Board of Studies be re-written as under :—

‘The teaching and examination schemes as also detailed syllabi of the subjects for the part examinations scheme for B.E. I to Final B.E. (Civil, Mechanical, Electrical and Metallurgical Engg.) as received with the agenda were discussed in detail and certain additions and deletions were made. The final form as approved including all these modifications is given in Annexure I.’

It was decided that this was a matter concerning the Board of Studies and the Faculty had only to consider the minutes of the meetings of the Board of Studies as received.

Therefore, if any change in the wording of the minutes of the Board of Studies was desired by the Convener, he might place the same before the next meeting of the Board of Studies.

5. The Faculty considered the recommendations of the Board of Studies in Engineering and Tech. made at its special meeting held on 3rd March, 1971 (*vide Appendix 'C'*).

*Resolved to recommend* that the aforesaid recommendations of the Board be accepted with the following modifications/observations :-

I. *Reference : Recommendation No. 1 :*

See Resolution No. 12 of the these minutes.

II. *Reference Recommendation Nos. 3, 4, 6 and 7 :*

(i) College Projects be called 'Project'.

(ii) Instead of 100 marks, 200 marks be allotted for the Training Report.

(iii) Instead of 250 marks, 350 marks be allotted for the 'Project Report' in the case of Post-graduate Diploma Course in Irrigation, Engineering and Hydrology so that the total marks will be 1400.

(iv) Instead of 300 marks, 400 marks be allotted for 'Project Report' in the case of (a) Post-graduate Diploma Course in Industrial Engineering and Entrepreneurship, (b) Post-graduate Diploma Course in Prestressed concrete and (c) Post-graduate Diploma Course in Mineral Dressing so that the total marks for each course will be 1400.

(v) The syllabus of 'Geology of Mineral Deposits' for the Post-graduate Diploma Course in Mineral Dressing be modified as given in *Appendix 'D'*.



### III. *Reference : Recommendation No. 5 :*

Two Post-graduate Diploma Courses in (i) Electrical Drives and (ii) Instrumentation be instituted with effect from 1971-72 and the revised schemes of teaching and examination and syllabi for them be as given in *Appendix 'E' and 'F'*.

### IV. *Reference : Recommendation No. 8 :*

New Ordinances and Regulations for Post-graduate Diploma Courses in Civil, Mechanical, Electrical and Metallurgical Engineering be introduced in the University Hand Book Pt. II as given in *Appendix 'G'*.

### V. *Reference ; Recommendation No. 9 :*

- (i) The students of the M.E. (Mech.) course be required to present a certificate showing their competence in a Foreign Language as required in other Post-graduate courses.
- (ii) In the proposed revised O.329-V 4, add '6a. Foreign Language' in the subject prescribed for First Year both for 'I Manufacturing Engineering Stream' and 'II The Thermal Engineering Stream.'
- (iii) In the proposed revised R. 41-E, Add 'Foreign Language' (Sessionals Only) 'under the schemes of Teaching and 'Foreign Language' under the schemes of Examination for First Year. There will be no examination in this subject and, therefore, no marks are to be assigned under the scheme of examination. The teaching hours for 'Project' under the headings 'P' and 'Total' be reduced from 4 to 2 and 2 hours per week be provided for foreign language.

## VI. Reference : Recommendation No. 10 :

(i) The examination scheme for M.E. (Met.) be modified so as to read as follows :—

## B. Examination Scheme

First Year,	Paper duration	Exam. Marks	Course Work	Total
1. Mathematics	3	100	50	150
2. Advanced Metallurgical thermodynamics	3	100	50	150
3. Advanced metallurgical kinetics	3	100	50	150
4. Experimental techniques in metallurgy.	3	100	50	150
5. Physical Chemistry of metal extraction.	3	100	50	150
6. Foreign Language	—	—	—	—
				750

*Second Year*

7. Advances in non-ferrous extra ctive metallurgy	3	100	50	150
8. Elective-I	8	100	50	150
9. Elective-II	—	100	50	150
10. Seminar	—	—	100	100
11. Dissertation	—	—	400	400
<hr/>				
		300	650	950
<hr/>				
Grand Total		800	900	1700

- (ii) The syllabus in Mathematics, Experimental techniques in metallurgy, Physical Chemistry of Metal extractions, Advances in Nonferrous Extractive Metallurgy, Physical Metallurgy of Nonferrous metals and alloys, Advanced aluminum technology and Physical metallurgy of light metals and alloys for M.E. (Met.) will remain unchanged and, therefore, the same be added.
- (iii) The schemes of teaching and examination and the syllabi for M.E. (Civil) Hydraulics be approved as given in *Appendix 'H'*.
- (iv) The existing schemes of teaching and examination and syllabi for other M.E. (Civil) courses and M.E. (Elec.) courses be repeated.

VII. *Ref. Recommendation No. 12 :*

- (i) Changes proposed in the syllabus for (a) B.E.III Civil-Mechanical Engineering III (c), (b) B.E. III (Mech.)-Engineering Metallurgy and material Science, (c) B.E. III (Elec.)-Mechanical Engineering III (E) and (d) Scheme of B.E. III (Met.) be accepted and made effective from July, 1971.
- (ii) Changes recommended by the Board in the syllabus of (a) B.E. IV (C) Surveying and (b) B.E. IV (C) Geology have already been recommended for acceptance vide Resolution No. 2 of these minutes read with Res. No. 4 (c) dated 18-11-70 of the Board of Studies.
- (iii) The proposed changes in Fourth Yr. B.E. (Elect.) from Workshop Technology and Metallurgy to Electrical machine design be approved for implementation from July 1971 subject to the consent of the students concerned and the

syllabus for Electrical Machine Design be as given in *Appendix I*.

6. The Faculty considered a letter dated the 10th Feb., 1971 from Prof. V.L. Talekar suggesting that the system of re-examination of answer books and system of moderation be scrapped.

*Resolved that—*

- (a) The Faculty strongly feels that the system of Moderation be continued but remuneration at the rate of Rs. 100/- per day be given to the members of the Board of Moderation as is given in other Universities.
- (b) The Faculty does not view with favour the system of re-examination of Answer-books, and
- (c) The revised rules for re-examination of answer-books effective from 1971 examination were considered and without prejudice to the earlier comment in para (b) above, the Faculty felt that the applications for scrutiny and re-examination of answerbooks be accepted from the candidates simultaneously so that the time gap is reduced to the minimum.

7. The Faculty considered a letter no E. 34-5/66 (T) Pt.-V dated the 10th Nov., 1970 from the Secretary, University Grants Commission forwarding a recommendation of the Standing Committee on Engineering Education suggesting that applied work such as developing important new techniques (new for the country) or designing and fabricating special instruments or apparatus should receive proper recognition and it should be made possible for such work to earn Ph.D. awards and that the University might evolve procedures and norms for evaluation of such work for the award of Ph.D. degree.

*Resolved to recommend* that (i) the aforesaid suggestion be accepted and (ii) writing of text-books of outstanding merits be also considered for awarding Ph.D. degrees in various branches.

8. The faculty postponed consideration of the suggestion of Shri S.N. Goyal, Principal, Jodhpur Polytechnic, Jodhpur made vide his letter No. G. 2/2812 dated 24-10-70 for admitting diploma holders to the Third Year class of the five Year B.E. course pending collection of details from the University of Jodhpur and other institutions.

9. The faculty considered a letter dated 27-11-70 from Shri B.S. Sharma, Estate Engineer, M.R.E. College, Jaipur requesting that the diploma of AMIE be recognised as equivalent to the B.E. degree for making a candidate eligible to do M.E. in parts with in a minimum period of three years.

*Resolved to recommend* that the request of Shri Sharma as such be not accepted.

10. With reference to its Res. No. 6 dated 11th October, 1969, the faculty considered the recommendations of the Committee appointed to recommend the minimum requirements (in respect of teaching staff/accommodation/laboratories/work-shops/Equipments/grants etc.) for the Bachelor's and Master's degree Courses in various branches of Engineering (*vide Appendix 'J'*).

*Resolved to recommend* that the aforesaid recommendations be accepted with the following modifications—

- (i) The teaching load in the recommendations be treated maximum and both maximum and desirable teaching load be mentioned as under :

Category of staff	Techning load maximum	Hrs. per week Desirable.
1. Professor and Head of the Deptt.	10	6

2. Professor	12	8
3. Reader	14	12
4. Lecturer	18	16

(ii) In the teaching staff recommended for the post-graduate course, substitute '1 Professor and 1 Reader' for '2 Readers and 1 Lecturer.'

11. With reference to the recommendations made at its special meetings held on the 24th March, 1970 and 16/17th April, 1970, it was reported to the faculty that :

(i) the Academic Council vide its Res. No. 9 dated the 21st April, 1970 resolved to recommend that (a) the rule regarding award of B.E. degree with Honours to the candidates who secure 70% or more marks in the aggregate in the Final examination be referred back to the Faculty with the Observations that such candidates be awarded 'distinction' and not 'Honours' (b) the other recommendations of the Faculty regarding the entire programme of teaching and examinations for the Bachelor of Engineering Courses be referred to the Examination reforms Committee headed by Dr. Daya Krishna, and (c) the Vice-Chancellor be authorised to place the recommendations of the Faculty together with those of the Examination Reforms Committee before the Syndicate :

(ii) The Syndicate vide its Resolution No. 41 dated the 16th May, 1970 considered the recommendations of the Faculty of Engineering & Tech. regarding the programme of teaching and Examinations for the Bachelor of Engineering courses together with the recommendations of the Examination Reforms committee there on made at its meeting held on 2nd May, 1970 and *resolved that* the recommendations

of the Faculty of Engg. and Tech. be accepted with the modification suggested by the Examination Reforms Committee to the effect that only two options be given to a students who fails to obtain the minimum number of pass marks in the aggregate as a whole viz., (i) the student reappears in that part of degree of the group in which he has failed or (ii) in the group as a whole together. In no case the student shall be allowed to appear in only that part of the group in which he had passed in the first instance. The Syndicate *further resolved* that the faculty of Engineering & Tech. and the Academic Council be asked to recommend consequential additions and/or alterations to the relevant statutes/ Ordinances/Regulations, and in the meanwhile status-que be maintained.

*Resolved that* (i) the report be recorded and (ii) the earlier recommendation of the Faculty to the effect that the degree of B.E. (Honours) be awarded to the candidates who secure 70% or more marks in the aggregate at the final B.E. examination be re-iterated in view of the fact that it was a general practice in all Engineering institution including the I.I.Ts. to award B.E./B. Tech. (Honours) and not B.E. distinction and even in this University this has been the practice right from the beginning.

12. I. The Faculty considered recommendation No. 1 dated the 3rd March, 1971 of the Board of Studies in Engineering and Tech. regarding part examination scheme for B.E. examinations. However, it was not able to finalise the consequential change in the Statutes/Ordinances/Regulations and therefore, *resolved that* consideration of the same be postponed to the next meeting alongwith any changes in the scheme or syllabus which might be considered necessary for implementation with effect from the examination of 1973.

II. In this connection the Faculty considered the follo-



wing suggestions made by some members in the meeting and resolved as follows :

- (i) The suggestion of Prof. V.L. Talekar that practical examination in Physics and Chemistry be held at the end of 2nd term instead of the end of each term be not accepted. (This decision was taken by 4:2 votes, 4 remaining neutral and the Dean not participating in voting).
- (ii) The proposal of Dr. R.S. Saxena and Prof. V.L. Talekar that 50 marks be substituted in place of 25 marks for practicals and sessionals in Physics and Chemistry at the B.E. I and B.E. II Part I and II Examinations be accepted.
- (iii) The workshop practice—II and Surveying practice at present in the first term of the II B.E. examination be shifted to the II term and Mechanical/Electrical/Metallurgical measurements be shifted from the II<sup>nd</sup> term to the first term. Instead of 75 marks, 100 marks be allotted for Mechanical/Electrical/Metallurgical measurements.
- (iv) The matter of providing tutorial periods for mathematics I and III papers of B.E. I examination be referred back to the Board of Studies for re-consideration with the observations of faculty that it was strongly of the view that providing tutorial periods in these papers would be desirable.
- (v) The proposal to increase the marks of English and Humanities I and II papers of B.E. II examinations from 50 marks to 75 marks each be referred back to the Board of Studies.
- (vi) The proposal of Prof. B. Ravindranath that the marks for general fitness for Engineering profession from I.B.E. to V.B.E. level be abolished because

they did not serve and academic purpose be referred back to the Board of Studies for re-consideration.

III. *Resolved further* to recommend that the existing scheme of examination and the syllabi for the B.E. examinations be repeated for the examinations of 1972 with the changes in the syllabi recommended vide foregoing Resolutions Nos. 2 and 5.

13. The Faculty *postponed* consideration of the letter No. DTE/Gen./3 (9)/70/8408 dated the 10th Nov., 1970 from the Director of Tech. Education, Rajasthan, Jodhpur regarding starting part-time courses leading to a degree in Engineering for Diploma-holders serving in the industry and other field organisations.

14. The Faculty considered a proposal of Prof. A.V. Ramanujam to effect that the duration of teaching periods be reduced from 1 hr. to 55 minutes.

*Resolved to recommend* that the proposal be accepted.

15. The Faculty considered a proposal of Prof R.M Advani regarding the students who were promoted to the next higher classes as late as in January/Feb., 1971 as a result of the scheme of re-examination of answer-books.

*Resolved* that (i) The Vice-Chancellor (ii) Principal, M.R. Engineering College and (iii) the Dean of the Faculty of Engineering and Tech. be authorised to decide the mode of conducting practical and sessional examinations for such students for 1971 examinations.

In this connection the Faculty Strongly felt that such late promotions posed really a difficult problem of conducting practicals and sessional work examinations in various laboratories.

16. The Faculty took up for consideration a proposal of Prof. V. L. Talekar (*vide Appendix K*) and in that context

considered the question of having consultations with the members of teaching staff and students on matters which directly affected the students and came before the Faculty. It was felt that this question might have far reaching implications in the working of other Faculties in the University. It was, therefore, decided that the question be referred to the Vice-Chancellor so that he might refer it to all the concerned Academic Bodies of the University for due consideration,

The meeting ended at 6.00 p.m. on the 31st March, 1971 with a vote of thanks to the Chair.

Sd/-D. Kumar

*Dean*

## APPENDIX A

*(Ref : Res. No. 1 of the Faculty of Engg. dt. 24th/31st march, 1971.)*

*The note of dissent on the so called Semester Scheme  
Ref : Agenda Item 2 (i)*

I. Because the Scheme has several built in faults and fallacies few of which are :

- (1) the proposed scheme is no better than the existing one being only a via media (vide item 1 (i) ).
- (2) the inherent faculty approach of grouping the subjects (vide item 1 (ii) ).
- (3) a student failing in a group will have to appear for both subjects of the groups (vide 1 (iii) ).
- (4) Because there is supplementary examination in practicals without having any further practical training (vide 1 (iv) ).

II. Because such a semester scheme in one Faculty of the University is going to have repercussion on existing schemes in other faculties and

III. Because the proposed is no improvement on the existing scheme, rather it is, on the other hand, an academically retrograde step.

I, the undersigned, sincerely think that the scheme as envisaged is totally inadequate and unworkable, and as such should be deferred for the present and should be referred to other faculties before any further move is made in his direction.

Sd/-

(Dr. V.L. Talekar)

Member Faculty of Engg. and Tech.

University of Rajasthan,

Jaipur.

Dated 16-4-70

## APPENDIX 'B'

(Ref:—Res. No. 2 of the Fac. of Engg. dated 24/31-3-71)

Minutes of the Meeting of the Board of Studies in  
Engineering and Technology held at 12 noon  
on 18th November, 1970.

## Present :

1. Prof. R.M. Advani, Convener.
2. Prof. D. Kumar.
3. Prof. R.S. Saxena.
4. Prof. G.S. Pandit.
5. Prof. C B. Rathie.
6. Prof. B. Ravindranath.
7. Prof. K.S. Shah.
8. Dr. R.D. Verma (by special invitation).
9. Dr. N.M. Sehgal (external member).

1. Resolved that under section 34 (4) (iv) of the University Act, Prof. B. Ravindranath be elected as Member of the Committee for the selection of Examiners in the subjects for the year 1971.

2. The reports of the Examiners as also Question Papers set for the examinations of 1970 were gone through and the following resolutions were adopted :—

- (a) Resolved that with effect from 1971 Examinations, reports of examiners be first sent to the Convener of the Board of Studies, who may decide the sequence of circulation of the same among the members of the Board.
- (b) It was further reiterated that the University should take more care in preparation of blocks for the figures in the question papers and in printing of the question papers. In quite a few question papers this year bad printing of figures was reported where dimension etc. were illegible.

3. Statement of qualifications and teaching experience etc. of teachers for inclusion in the revised panel of examiners for 1971 were considered and the Board revised the panel.

4. (a) Resolved that parts examination scheme as already approved by the Academic Council in April, 1970 be implemented progressively with effect from 1972 examinations.
- (b) Resolved that proposal made by Dr. K.S. Shah for revising M.E. (Mech.) Scheme of the teaching, examination be referred to the Sub-Committee of the following members :—
  1. Prof. D. Kumar (Convener).
  2. Prof. M.M. Dandekar.
  3. Prof. C.B. Rathie.
  4. Prof. B. Ravindranath.
  5. Prof. K.S. Shah.

It was further resolved that the recommendations of the Sub-Committee be placed directly before the next meeting of the Faculty of Engineering and Technology.

- (c) Resolved that w.e.f. the examination of 1972, syllabus in the subjects of Surveying-III and Geology for B.E. IV Civil be modified as indicated in Appendix I.
5. Resolved that with effect from 1971 examinations,
- (a) Supplementary examinations be held also for Practicals and Sessionals.
  - (b) Grace marks benefit in the examination be also extended to 'Practicals and Sessionals'.
  - (c) Practical examinations at M.E. Courses in each Practical including Sessional (course) work be conducted by a Board of Examiners, which shall ordinarily include one external examiner.
  - (d) At final B. E. Examinations the viva voce examination in 'Practical training reports' be conducted by the University with a Board of Examiners consisting of following members :—

- (i) Prof. of Training and Placement, M.R. E.C. Jaipur.
  - (ii) One internal examiner from each of Civil, Mechanical, Electrical and Metallurgical Engineering Departments of the Malaviya Regional Engineering College, Jaipur and
  - (iii) One external examiner for each of the branches of Engineering. Principal shall be the Ex-officio Chairman of this Board.
- (e) Detailed syllabi for subjects at B.E. II to Final B.E. level of the parts examination scheme be submitted by the respective Heads of Departments of M. R. E. C. Jaipur to the Convener. The detailed syllabi be then considered at a special meeting of the Board of Studies to be held this year before the Faculty meeting.

6. Suggestion made by the Vice-Chancellor of the University of Rajasthan in consultation with the Convener of the Examination Reforms Committee were considered and it was resolved that :—

- (a) regarding award of sessional marks, the Faculty of Engineering and Technology has already in force sessional assessment scheme where proper weightage is given to viva-voce, Quiz, written tests etc., which broadly cover the recommendations of the Vice-Chancellor regarding articulation, comprehensive and objective tests.
- (b) The system of full and half courses, specialization and general system of elective is already incorporated in the postgraduate teaching and examination scheme of the Faculty of Engineering and Technology.
- (c) Suggestion of Vice-Chancellor regarding assessment of sessional entirely based on the self-study on pre-assigned topics was considered and it was resolved that for courses in engineering at undergraduate level the sessional assessment is based on specific laboratory/design courses and for post-graduate courses

the Vice-Chancellor's recommendations already stand implemented.

7. With reference to the Academic Council Res. No. 35 dated 21-4-70 regarding alternative Schemes of Examination and courses it was resolved that the draft resolution prepared by the Chairman of Examination Reforms Committee was, in broad sense, already accepted by this Board and new schemes of teaching and examinations for undergraduate courses in Engineering as approved by the Academic Council in its meetings held in April, 1970 is more or less in accordance with the contents of the above said resolution. These schemes already incorporate the principle of alternative schemes of courses by way of introduction of elective subjects.

8. The appointment of Shri B.V. Doshi vice Shri A.P. Kanvinde on the Sub-committee for Architecture and Town Planning made by the Vice-Chancellor was noted.

9. The recommendations of the Sub-Committees for.

(i) Chemical Engineering (Ceramics & Silicate Technology) and (ii) Architecture Town Planning were considered. It was noted that the recommendations did not contain detailed syllabi. It was resolved to request the Sub-Committees concerned to send the detailed syllabi as soon as possible considering the following points.

(a) The possibility of including the subject of Fluid Mechanics as a separate paper for Chemical Engineering branch be explored.

(b) The draft scheme of teaching and examinations for the degree course in Architecture does not have first two years common with other degree courses in engineering. The Sub-Committee may explore possibilities of keeping first two years common with those in Civil, Mechanical, Electrical and Metallurgical Engineering branch. Also it may consider the desirability of including Acoustics as a Compulsory subject instead of an elective subject. It was also felt that Air Conditioning, City and Rural Planning Illumination, Electrical Services, Ventilation be given more weightage and this may be kept



in view by the Sub-Committees while drafting detailed syllabi.

10. Complaints were discussed and noted. It was resolved to reiterate that the University may take more care in preparing of blocks and printing of question paper in future.

11. Lists of publications received from the Commission for Scientific and Technical Terminology and from National Book Trust were considered and it was felt that since this Board does not have the practice of prescribing specific Text books for specific subjects, there was no need to include the books in the University syllabi.

12. Letter received from Dr. K.S. Shah was considered and it was resolved that :—

(a) Proposal at (C) regarding introduction of Sandwich pattern of teaching be accepted. Under this scheme the Degree course in Engineer (Civil, Mechanical, Electrical and Metallurgical Engineering branches) will be of  $5\frac{1}{2}$  years duration. In this scheme, at the end of III and IV years there will be training for six weeks each in a suitable industry or Government Department. At the end of the first term/part of the Final Year there will be 30 weeks of training at a suitable industry/Govt. Department; after which the students will undergo the 2nd term/part of the final year course. The final examination at the end of the 2nd term/part for these students will be held out of phase with that for five year course students i.e. in November/December.

(b) Proposal at (d) regarding revised scheme of working and examination is already covered under resolution vide item No. 4 of this meeting.

Proposals regarding (a) and (b) were withdrawn by Dr. K.S.Shah.

13. Letter from Dr. D. Kumar was considered and it was resolved that with effect from 1972 examinations, subject to the consent by the students concerned, the changed theory papers and practicals as enclosed at Appendix-II be

introduced at B.E. 3rd (Met) level. The details of the syllabi are also enclosed in Appendix-II.

14 As proposed by Dr. Kumar, Prof. B. Ravindranath and Dr. K.S. Shah, it was resolved that below mentioned changes be made effective from 1972 examinations subject to consent of concerned students:-

<i>Examination</i>	<i>Subject</i>	<i>Remarks</i>
(a) B.E. III (C)	‘Mechanical Engineering (C)	The syllabus be replaced by modified syllabus enclosed as App. III.
(b) B.E. III (M)	‘Engineering Metallurgical and Material Science vice ‘Engineering Metallurgy.’	The paper of ‘Eng. Metallurgy be replaced by the paper ‘Engg. Mett. and Material Science’ with the syllabus as enclosed at App. IV
(c) B.E. III (E)	‘Mech. Engineering (E) vice ‘Heat Engines-II (E)	The paper of ‘Heat Engines-II (E)’ be replaced by ‘Mech. Engineering (E)’ with syllabus as enclosed at App. V.

The meeting was over at 4.15 P.M. with a vote of thanks to the Chair.

Sd/R.M. Advani  
Convener

## APPENDIX-I (a)

Following portion may kindly be added in the syllabus of 4th year Civil 'Surveying' for the year 1972.

*Astronomy :*

1. Determination of latitude and time Photogrammetry:—
  1. Flight planning for a mapping project.
  2. Methods of Plotting maps from aerial photographs.
  3. Principle and application of parallax bar.

*Triangulation :*

Study of Modern theodolites—Tavistock and Wild T2 and their application in the measurement of horizontal and vertical angles.

## APPENDIX I (b)

IV Yr. B.E. (Civil).

**Geology :***Introduction :*

Object and scope of geology. Interior of earth.

*General Geology :*

Weathering and their agents, geological work of glaciers, rivers, wind, lakes and sea—Earthquake and volcanoes.

*Structural Geology :*

Dip, Strike, bedding, out crop, folds, faults and their classification and recognition. Unconformity, outlier and inlier, dyke, sill, batholith, lacolith, stock and boss.

*Mineralogy :*

Physical properties of minerals and study of Quartz. Orthoclase, Microcline, Tourmaline, Muscovite, Biotite, Hornblende, Olivine, Augite, Sodalite, Garnet, Apatite, Talc, Kyanite, Calcite, Dolomite, Baryte, Chalcopyrite, Pyrite,

Magnetite, Hematite, Galena, Schalerite, Pyrolusite, Graphite, Orpiment and Realgar, megascopically (in hand specimen).

Use of polarising microscope and study of Quartz, Orthoclase, Muscovite, Biotite, Hornble, Augite, Hypersthene, Microcline, Olivine, Albite, Granite, Rhyolite, Dolerite and Basalt, under microscope.

### *Petrology :*

Formation, origion and classification of sedimentary, matamorphic and igneous rocks, their uses as construction material.

### *Historical Geology :*

Elementary principles of stratigraphy, standard stratigraphical scale and the details of Arvalli, Delhi and Vindhyan systems. Occurence; of building and construction materials in India.

### *Engineering Geology :*

Importance of geology in Civil Engineering, Geological investigations and their influence on the selection, location and type of dams, reservoir, tunnels and piers, precaution and treatment against faulting, folding, joints and ground water, land slides and hill slopes.

## APPENDIX II

*Third B.E. Examination (Metallurgical Engg. Branch.)*

<i>Subject.</i>	<i>Hrs./Week</i>	<i>Exam./Hr.</i>	<i>Marks</i>
1. Mechanics of Materials.	2+1T	3	100
2. Electrical Engineering.	2	3	100
3. Geology and Mineralogy.	2	3	100
4. Introduction to Process Metallurgy.	2+1T	3	100
5. Introduction to Physical Met.	2	3	100
6. Metallurgical and Instrumental Analysis.	2	3	100
7. Metallurgical Thermodynamics and Kinetics.	2	3	100
8. Elements of Material Science.	2+1T	3	100
<hr/>			
16+3T			800
<hr/>			
<i>B. Practicals and Sessionals.</i>			
9. Metallurgical Drawing.	4		75
10. Electrical Laboratory & Workshop Practice.	2		75
11. Geology and Mineralogy.	3		75
12. Metallurgical Thermodynamic and kinetics	2		50
13. Metallurgical and Instrumental Analysis	3		75
14. Physical Metallurgy.	2		50
<hr/>			
16			400
<hr/>			
<i>C. Sessionals only.</i>	—		Nil
<i>D. 15. General Fitness for Profession.</i>	—		100
<hr/>			
Grand Total	35		1300

*Additional Paper (Optional).*

Mathematics VIII	Max. Marks	100
or		
Science of Metals	Pass Marks.	33

## APPENDIX II (b)

## III B.E. (Met.)

*Introduction to Process Metallurgy :*

Economic importance of metallurgical industries. Location of principal ore bodies and extraction plants. Indian mineral resources and metallurgical industries.

Preparation of ores for smelting. Roasting, reduction and matte smelting, converting, refining and electrolysis. Simplified flow sheets for the production of iron and steel, copper, aluminium, lead and zinc.

Indian resources of fuels Comparative study of solid, liquid and gaseous fuels. Constitution of coal, washing coal, Combustion of coal. Carbonization. Coking industries. Metallurgical coke. Testing of Fuels economy. Production of water gas and producer gas.

Principal acid, basic and neutral refractories, their composition and important properties. Insulation and other special refractories. Manufacture and testing of important refractory materials.

Selection of refractories for the furnace construction with special reference to Indian Metallurgical Industries.

*Introduction to Physical Metallurgy :*

Solidification of pure metals and alloys; Chilled, Columnar and equiaxial crystals, dendritic growth, imperfections: normal, inverse and gravity segregation and coring.

Phase rule, binary equilibrium systems: isomorphous, eutectic, peritectic, monotectic etc., Order disorder transformation; Study of phase diagrams, metallography and properties of commercially important alloy systems viz Cu-Zn, Cu-Sn, Cu-Ni, Cu Al, Pb-Sn, Al-Cu Al-Si etc.

Detailed study of iron carbon equilibrium diagram, effect of alloying elements.

Basic principle of heat-treatment; annealing, normalizing, hardening and tempering. T.T.T. curve, hardenability; factors affecting.

Metallurgical microscope: principle. defects chromatic and spherical aberrations etc. type of microscopy: dark and bright field illumination, oblique illumination, polarized light etc.

Methods of detection of phase changes and construction of equilibrium diagrams Resistivity measurements, dilatometry, cooling and heating curves, specific heat measurements.

### *Metallurgical and Instrumental Analysis :*

Methods of sampling of ores, metals and alloys and other metallurgical products.

Specific methods of detection of Cr, Ni, Cu, Pb, Zn, Al, Mn and W in ferrous and nonferrous alloys. Spot tests.

Quantitative analysis of Iron and Steel, Alloy steels, nonferrous metals and alloys, ores and slags.

Fire-assay of precious metals, proximate and ultimate analysis of coal. Analysis of liquid and gaseous fuels.

*Instrumental:* Importance of instrumental analysis in comparison with chemical analysis. Fundamental physico-chemical principles involved equipment required in such analysis viz-colorimetry, absorptiometry, spectroscopy, potentiometry, amperometric titration, Coulometric titration, Polarography, Conductometry, electro-analysis and flame photometry.

X-rays and electron-probe micro-analyser as means of chemical analysis.

Error of observation and accuracy of measurements.

### *Science of Metals :*

Structure of the atom. Quantum numbers, electronic configuration of elements and its influence on their properties.

Basic properties of the nucleus, nuclear forces, general features of nuclear reactions, natural radioactivity, artificial transmutations.

Review of kinetic theory of gases, statistical mechanics electron theory of metals. Para-and di-magnetism.

X-rays-properties and production, continuous and characteristic spectra, absorption of x-rays, filters, scattering and diffraction. Principles underlying powder, rotating crystal and Laue method used in x-ray metallography.

Diffusion:-Mass transport in solids, Fick's law, Kirkendall effect. Mechanisms of diffusion.

Thermodynamics of alloying, free energy composition diagrams.

Basic concepts of the theory of dislocation.



## APPENDIX (iii)

## III B.E. (Civil)

## Mechanical Engineerig (Civil)

*Mechanical Fabrication processes :*

Riveting-hot and cold, welding gas and electric arc. Electrodes and their selection, position welding welded joints; Plumbing, Sheet metal working, pneumatic tools for ramming, riveting, vibrating and chieseling.

*Mechanical Handling :*

Basic constructional features and principle of working of working of conveyores, Elevators, Forklifts trucks, cranes, crabs and winches.

*Earth moving equipment :*

Basic constructional features and principle of working of Shovels, Graders and Bulldozers.

*Irrigation Machinery :*

Types of pumps used for low and high head small and large discharge service. Constrcution and principle of working. Starting, stopping, operatipn and maintenance of pumps Pump characteristics, specifying the pump for different service. Selection of drive for the pumps and diesel engine and electric motors. Specifying the drive.

*Agricultural Equipment :*

Basic constructional features and principle of working of tractors, crawlers and their implements drawbars, Power take off shafts, Harrow, Ploughs and maw thrashars.

Elements of heating, ventilation and air conditioning. Load calculation. Heating systems, ventilation systems. Principles of air conditiong. Application to community and residential buildings. Application of refrigeration in construction of dams, tunnels and skating rings.

## APPENDIX-IV

### III B.E. (Mech.)

#### *Engineering Metallurgy and materials Science*

Engineering properties of metals and alloys. Crystalline structure, phase equilibrium.

Heat treatment of Metals and alloys. Effect on strength, hardness and structure.

Metallurgy of melting, rolling, forging and joining processes in mechanical engineering.

Destructive and non-destructive testing of metals and alloys.

Corrosion, stress-corrosion, fatigue and creep in mechanical engineering materials.

Pyrometry.

Properties and applications of refractory and insulating materials, rubber, plastics and ceramics.

## APPENDIX-V

## III B.E. (Elec.)

*Mechanical Engineering (E)*

Internal energy, enthalpy and change of heat. work done. Calculation of entropy, for thermodynamic processes on steam.

Steam power cycles—Rankine and modified Rankine cycle.

Steam nozzles : Flow of steam through nozzle, critical pressure ratio, super saturated flow, effect of friction, conditions for maximum discharge.

Steam Turbines : Impulse and reaction types, methods of compounding, velocity diagrams.

Steam turbine cycles : Bleeding reheating and regenerative feed heating. Stage efficiency. Overall efficiency.

Constructional features of steam turbines. Governing of steam turbines and governors. Special turbines, like pass out back pressure and mixed flow turbines.

Steam Condensers : Types, construction and working principles. Calculation of cooling water requirement. and vacuum efficiency, sources of air leakage, combined and separate extraction pumps.

Cooling towers and spray ponds.

Air compressors : Working cycle of single and multi-stage reciprocating compressors. condition of minimum work Effect of clearance, intercooling and suction conduction. Imperfect intercooling. Air horse power, shaft horse power. volumetric isothermal adiabatic and overall efficiencies. Constructional features and safety devices.

Rotary compressors : Positive displacement and aerodynamic type. Principle of working constructional features and polytropic index. Power requirement and efficiency.

Filting of air.

Internal Combustion Power Plants : Schematic Layout, maintenance, Log book, Selection, Power limits,

Introduction to machine tools like lathe, Shaper drilling machine, Milling machine, turret lathe, grinders,

Forging and press working : Power hammers, forging dies, power presses, press working dies.

Welding; Oxyacetylene gas welding and equipment. Oxyacetylene torch cutting. Thermit welding, soldering and braxing. Arc. welding and its equipment. Electrodes-classification and applications. Resistance welding.

## APPENDIX-C

Minutes of the meeting of the Board of Studies in Engineering & Technology held at 12 noon on 3rd March, 1971 in the University Office, Jaipur.

Following members were present :

1. Dr. Dharmendra Kumar.
2. Prof. R.C. Saxena.
3. Prof. C.B. Rathie.
4. Prof. G.S. Pandit.
5. Prof. B. Ravindranath.
6. Prof. M.M. Dandekar.
7. Prof. K.S. Shah.
8. Dr. N.M. Sahal.
9. Prof. R.M. Advani. (Convener)

The teaching and examination schemes as also detailed syllabii of subjects for the part examination scheme for I to Final B.E. (Civil, Mach, Elect. & met. Engg.) were considered and approved as given in Annexure—I.

The advisability of starting part examination scheme for 2 or more classes simultaneously from July, 1971 was discussed in detail and it was decided that B.E. I & II classes examinations be simultaneously run on part examination scheme from the session beginning in July, 1971.

2. The Board noted contents of the letters received from Prof. Manickam of Delhi and Prof. Doshi of Ahmedabad, both members of sub-committee on Architecture and Town Planning of the Board of Studies. The members expressed their desire to withdraw from the membership of the sub-committee. In view of this the Board of Studies resolved to recommend the following two names to work in place of the above two members :

- ( i ) Prof. M.B. Achawal, Kala Bhawan, Baroda.
- ( ii ) Shri A.P. Kanvinde of M/s Kanvinde & Rai, 14F, Connaught Place, New Delhi—I.

As regards the course content of the proposed course the Board of Studies decided to review this point after the recommendations of the sub-committee as reconstituted.

3. The proposal of Prof. M.M. Dandekar for introducing a one year industry oriented postgraduate diploma course in irrigation engineering and hydrology with effect from 1971-72 was accepted. The teaching and examination scheme as also detailed syllabi as approved are given in Annexure-II.
4. The proposal of Dr. K.S. Shah for introducing a one year industry oriented postgraduate diploma course in "Industrial Engineering and Entrepreneurship" w.e.f. 1971-72 was accepted. The teaching and examination schemes as also detailed syllabi as approved are given in Annexure-III.
5. The proposal of Prof. B. Ravindranath for introducing a one year industry oriented postgraduate diploma course in "Industrial Drives" w.e.f. 1971-72 was accepted. The teaching and examination scheme as also detailed syllabi as approved are given in Annexure-IV.
6. The proposal of Prof. G.S. Pandit for introducing a one year industry oriented postgraduate diploma course in "Prestressed concrete" w.e.f. 1971-72 was accepted. The teaching and examination scheme as also detailed syllabi as approved are given in Annexure-V.
7. The proposal of Prof. D. Kumar for introducing a one year postgraduate diploma course in "Mineral Dressing" w.e.f. 1971-72 was accepted. The teaching and examination scheme as also detailed syllabi as approved are given in Annexure-VI.
8. The minimum admission qualifications for the courses mentioned in items 3 to 7 will be 50% marks in Bachelor's degree examination of the Rajasthan University in respective branch or equivalent there of.
9. It was proposed Prof. Dharmendra Kumar, Chairman of the sub-committee of the Board of Studies (constituted as per item IV of the minutes of the meeting of the Board of Studies in Engineering & Technology held on 18.11.70) for the revision of the teaching and examination scheme of M.E. (Mech.) courses as revised by the sub-committee and placed on the table be approved w.e.f. the session 1971-72. The proposal of Prof. D. Kumar was accepted. The scheme as also detailed syllabi of the M.E. (Mech.) courses as approved are enclosed as Annexure-VII.
10. Dr. Dharmendra Kumar, Prof. B. Ravindra Nath and Prof. M.M. Dandekar proposed that the courses in M.E.

M.E.(Elec.) and M.E.(Civil) respectively be revised w.e.f. July, 1971 as per Annexure-VIII, IX and X attached herewith. The proposals were accepted.

11. It was proposed by Prof. R.M. Advani that the name of Shri H.B. Gajaria, Superintending Engineer, Ministry of Shipping and Transportation, New Delhi, be included in the pannel of Examiners for Civil Engineering subjects. The proposal was accepted.

12. As proposed by Prof. B. Ravindranath, Prof. M.M. Dandekar and Prof. D. Kumar, it was resolved that below mentioned changes be made effective from 1972 examination. These changes were approved by the Board of Studies in its meeting of 18.11.70, vide item No. 13 and 14 of the minutes wherein it was stated that these changes be brought subject to consent of the concerned students.

<i>Examination</i>	<i>Subject</i>	<i>Remarks</i>
(a) B.E. III (C)	Mech. Engg.-III (C)	Syllabus is replaced by the old subjects as per enclosure-XI.
(b) B.E. III (M)	Engg. Metallurgy & Material Science vice Engg. Metallurgy.	The paper of Engg. Metallurgy be replaced by Engg. Met- & Material Science as per Annexure XII.
(c) B.E. (Elec.)	Mechanical Engg. III(E) vice Heat Engines II (E)	The paper of Heat Engines-II (E) be replaced by Mech. Engg. III (E) as per Annexure-XIII.
(d) B.E. III (Met.)	The schemes of working & examinations be replaced by the scheme given in Annexure-XIV.	The change in syllabi involved is in the subjects of Introduction to Process Metallurgy (Annexure XV) Introduction to Physical Metallurgy (Annexure-XVI)

		Metallurgical & Instrumental analysis (Annexure. XVII) and Science of Metals (Annexure—XVIII ).
(e) B.E. IV (C)	Surveying	Items given in Annexure --XIX be included in the syllabus-
(f) B.E. IV (C)	Geology	The existing syllabi be replaced by the syllabi given in Annexure—XX.
(g) B.E. IV (E)	Electrical Machine Design Vice Workshop Technology & Metallurgy (E).	Syllabus of Electrical Machine design is given enclosure XXI.

The meeting concluded at 2.30 p.m. with a vote of thanks to the Chair.

Sd/-  
R.M. Advani  
(Convener.)



## FIRST B.E. EXAMINATION

(All Branches)

## First Term

<i>A. Written Papers</i>	<i>Hrs./Week</i>	<i>Exam. Hrs.</i>	<i>Marks</i>
1. a. Mathematics I	2	2	50
2. a. Mathematics II	4+1 T	3	100
3. a. Chemistry	4+2 T	3	100
4. a. Physics I	4+2 T	3	100
5. a. English I	2	2	50
	<hr/> 16+5 T		<hr/> 400

*B. Practicals & Sessionals*

6. Chemistry Lab. I	2		25
7. Physics Lab. I	2		25
8. Workshop Practice	3		50
9. Practical Geometry I	4		75
10. English & Humanities	3		75
	<hr/> 14		<hr/> 250
Part I total	<hr/> 35		<hr/> 650

## Second Term

*A. Written Papers*

1. b. Mathematics III	2	2	50
2. b. Mathematics IV	4+1 T	3	100
3. b. Chemistry II	4+2 T	3	100
4. b. Physics II	4+2 T	3	100
5. b. English II	2	2	50
	<hr/> 16+5 T		<hr/> 400

*B. Practicals & Sessionals*

11. Chemistry Lab. II	2		25
12. Physics Lab. II	2		25
13. System Design.	3		50

14.	Machine Drawing IIL	3	75
15.	English & Humanities II	3	75
		<hr/> 1L + 13	<hr/> 250
	Part II total	35	<hr/> 650
C. 16.	General fitness for profession.	—	100
			<hr/> 1400
	Grand total		<hr/> 1400

SECOND B.E. EXAMINATION  
(All Branches)

First Term

<i>A. Written Papers</i>	<i>Hrs/Week</i>	<i>Exam. Hrs.</i>	<i>Marks</i>
1. a. Mathematics V	5 + 1 T	3	100
2. a. Engineering Chemistry I	2	2	50
3. a. Engineering Physics I	2	2	50
4. a. Electrical Engg	4 + 2 T	3	100
5. a. Machine Drawing-II	1	3	50
6. a. Mechanical Engineering I	2	2	50
	<hr/> 16 + 3 T		<hr/> 400
<i>B. Practical &amp; Sessionals</i>			
7. Engg. Chemistry Lab. I	2		25
8. Engg. physics Lab. I	2		25
9. Workshop Practice-II	4		50
10. Machine Drawing-II	3		75
11. Surveying practice	2		25
12. English & Humanities-I	3		50
	<hr/> 16		<hr/> 250
Part I total	35		<hr/> 650

## Second Term

*A. Written Papers*

1. b. Mathematics VI	6÷2 T	3	100
2. b. Engg. Chemistry II	2	3	50
3. b. Engg. Physics II	2	2	50
4. b. Basic Electronics	3÷1 T	3	100
5. b. Practical Geometry-II	—	3	50
6. b. Mech. Engg. II	2	2	50
	<hr/> 15÷3 T		<hr/> 400

*B. Practicals & Sessionals.*

13. Engg. Chemistry Lab. II	2	25
14. Engg. Physics Lab. II	2	25
15. Mech/Elec/Met Measurements	6	75
16. Practical Geometry-II	4	75
17. English & Humanities-II	3	50
	<hr/> 17	<hr/> 250
Part II total	35	<hr/> 650

C. 18. General fitness for profession.	—	100
		<hr/> 1400
Grand total		<hr/> <hr/> 1400

## III B.E. (Civil)

## First Term

<i>A. Written Papers</i>	<i>Hrs./Week</i>	<i>Exam. Hrs.</i>	<i>Marks</i>
1. a. Mathematics VIC	4÷2 T	3	100
2. a. Surveying I	4÷2 T	3	100
3. a. Bldg. Construction	4	3	100

4. a. Strength of Materials and Theory of Structures I (C & E)	2+2 T	2	50
5. a. Applied Mechanics	2	2	50
Total	16+5 T		400

*B. Practicals and Sessionals*

6. Surveying including project.	4		75
7. Applied Machines	2		50
8. Bldg. Design and Drg. I	4		50
9. Graphic statics	4		75
	14		250
Part I Total	35		650

**Second Term***A. Written Papers*

1. b. Mathematics VIII(c)	2+1 T	2	50
2. b. Hydraulics.	4+2 T	3	100
3. b. Geology	4	3	100
4. b. Strength of materials & theory of structures II	2+2 T	2	50
5. b. Mechanical Engg. III(c)	3+1 T	3	100
Total	15+6 T		400

*B. Practicals and Sessionals*

10. Mechanical Engg.	2		50
11. Hydraulics	2		50
12. Geology	4		50
13. Surveying	2		50

14. Bldg. Drawing and Design	4	50
	<hr/> 14	<hr/> 250
Part II Total	<hr/> 35	<hr/> 650
15. General fitness for profession		
Grand total		<hr/> 1400

IV B.E. (Civil)

I First Term

<i>A. Written Papers</i>	<i>Hrs./Week</i>	<i>Exam. Hrs.</i>	<i>Marks</i>
1. a. Theory of Structures.	4+2 T	3	100
2. a. Structural Engg. Design I	4	3	100
3. a. Hydraulics and Hyd. M/C.	4+1T	3	100
4. a. Roads Rlys. and Air Post Engg.	5+1 T	3	100
5. a. Advanced construction or Docks and Harbour Engg.	4	3	100
	<hr/> 21+4 T		<hr/> 500

*B. Practicals & Sessionals*

1. Structural Engg. Design I	2	50
2. Hydraulics Laboratory	4	75
3. Road M.T. Laboratory	2	25
4. Field Engg.	2	75
	<hr/> 10	<hr/> 225
Part I Total	<hr/> 35	<hr/> 725

## II Second Term

*A. written Papers*

1.	Soil mechanics and Foundation Engg.	4+1 T	3	100
2.	Structural Engg. Design II	4	3	100
3.	Surveying II	4	3	100
4.	Architecture & T.P.	4	3	100
5.	Elective Paper II Advanced Structural Analysis or Applied Elasticity and Plasticity	4	3	100
<hr/>				
20+1 T				500
				<hr/>

*B. Practicals and Sessionals*

6.	Soil mechanics Lab.	3	75
7.	Structure Engg. Design II	2	50
8.	Surveying II	3	50
9.	Material Testing Lab.	2	25
10.	Concrete Laboratory	4	75
		<hr/>	
		14	275
		<hr/>	
Part II Total		35	775
11.	General fitness for profession		100
			<hr/>
Grand Total			1600
			<hr/>

## FINAL B.E. (Civil)

## I First Term

(A) Written paper	Hours/Week	Exam.Hrs	Marks
1. a. Structural Engg. Design III	5	4	100
2. a. P.H. Engineering	5	3	100
3. a. Engineering Economics	5	3	100
4. a. <i>Elective Paper III</i>			
Water Resources Engg.	} 4	3	100
or Fluid Mechanics.			<hr/> 400
	19		
(B) Practicals and Sessionals.			
5. Structural Engg. Design III	6		100
6. P.H.E. lab	4		50
7. Estimating	4		75
8. Structures Lab.	2		50
	<hr/> 16		<hr/> 275
Part I Total	35		<hr/> 675

## II Second Term

## (A) Written papers

1. b. Structural Engg. Design II	5	4	100
2. b. Irrigation and W.P. Engg.	5	4	100
3. b. Experimental Stress Analysis	4	3	100
4. b. <i>Elective Paper IV</i>			
Advanced Design of Structures	} 4	3	100
or Prestressed concrete.			<hr/> 400
	<hr/> 18		<hr/>

*B. Practicals and Sessionals.*

9. Structural Engg. Design II	6	100
10. Irrigation Design	4	75
11. P.H.E Lab.	2	50
	<hr/>	<hr/>
	12	225
12. C. Seminar	4	100
13. D. Project.	11	200
	<hr/>	<hr/>
Part II Total	35	525
	<hr/>	<hr/>
14. E. Practical Training Report		200
15. F. General fitness for profession.		100
		<hr/>
Grand Total :		1900
		<hr/>

## III B.E. (MECHANICAL)

## I First Item

*A. Written Papers :*

<i>S.No.</i>	<i>Subjects</i>	<i>Hours/Week</i>	<i>Exam.Hrs</i>	<i>Marks</i>
1. a.	Solid mechanics	3+2 T	2	50
2. a.	Material Science	2+1 T	2	50
3. a.	Electrical Technology	4+1 T	3	100
4. a.	Tech. Thermodynamics I	4+1 T	3	100
5. a.	Production Materials & Processes.	4	3	100
		<hr/>		<hr/>
		17+5 T		400



**B. Practicals & Sessionals :**

6. Materials Science Lab.	2.	—	50
7. Elect. Engg. Lab	2	—	50
8. Mech. Engg. Lab.	3	—	50
9. Workshop Practice.	6		100
		<hr/>	
	13		250
Total	35 Hours.		650

**II Second Term****A. Written Papers :**

1. b. Fluid Mechanics	3+2 T	2	50
2. b. Engg. Metallurgy	2+1 T	2	50
3. b. Mathematics VII M	4+2 T	3	100
4. b. M/c. Drawing & Design	4+2 T	4	100
5. b. Tech. Dynamics-I	4+1 T	3	100
		<hr/>	
	17+8T		400

**B. Practicals & Sessionals :**

10. Fluid Mechanics Lab.	2		50
11. Met. Engg. Laboratory	2		50
12. Machine Drawing & Design	4		100
13. Tech. Dynamics Lab.	2		50
		<hr/>	
	10		250
Total	35 Hours.		650

C. 14. General fitness for profession 100

Grand Total 

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 1400

## IV B.E. (MECHANICAL)

## I First Term

A. *Written Papers :*

<i>S.No. Subjects</i>	<i>Hours/Week</i>	<i>Exam./Hrs</i>	<i>Marks</i>
1. a. Tech. Thermodynamics-II	3+1 T	3	100
2. a. C. Engg.	3+1 T	3	100
3. a. Mfg. Drg. & Mech. Engg. Design I	4+2 T	3	100
4. a. Industrial Electronics and System Control.	3	3	100
5. a. Elective Paper-I* Gas Dynamics, or Production Planning & Control, or Material, Handling & Plant layout	3+1 T	3	100
	<hr/> 16+5 T		<hr/> 500

B. *Practicals & Sessionals :*

6. Mech. Engg. Lab.	3		50
7. Heat Transfer Lab.	3		50
8. Control Lab.	2		50
9. Mech. Engg. Design.	6		100
	<hr/> 14		<hr/> 250
Total 35 Hours			750

## II Second Term

4. *Written Papers :*

1. b. Measurements, Instruments & control	3	3	100
2b. Production Technology	4+1T	3	100
3b. Technical Dynamics-II	3+1T	3	100
4b. Rotomachines-I	4+2 T	3	100

5b. Elective Paper-II*	3÷1 T	3	100
Heat & Mass Transfer or Production Machines, or Exptl. Stress Analysis.			
	<hr/> 17÷5 T		<hr/> 500

*B. Practicals & Sessionals :*

10. Metrology Laboratory	2	50
11. Aero & Gas dyn. Lab.	3	50
12. Tech. Dynamics Lab.	2	50
13. Workshop Practice.	6	100
	<hr/> 13	<hr/> 250
Total	35 Hours.	750
General fitness for profession.		100
Grand Total		1600

V.B.E. (MECHANICAL)

I First Item

*A. Written Papers :*

S.No. Subjects	Hours/Week	Exam/Hrs.	Marks
1a. Rotamachines II	4÷2 T	3	100
2a. Technical Dynamics III	3÷1 T	3	100
3a. Industrial Psychology and Management.	3÷1 T	3	100
4a. Elective Paper-III*			
Statistics & Operations Research	3÷1 T	3	100
or Work Study or Bearings & Lubrication.			
	<hr/> 13÷5T		<hr/> 400

\* To be declared by the Principal in the previous semester, and to be offered by all students.

*B. Practicals & Sessionals :*

5. Rotomachines Lab.	3	50
6. Production Lab.	3	50
7. Tech. Dyn. Lab.	3	50
8. Fabrication Project.	6	150
	<hr/> 15	<hr/> 300
9. Seminar	2	
Total	35 Hours	700

**II Second Term***A. Written Papers :*

1a. Refrigeration & Air conditioning	3+2 T	3	100
2b. Mech. Engg. Design-II	4+2 T	4	100
3b. System Design.	3	3	100
4b. Elective Paper IV*	3+1 T	3	100
Power Station Practice, or Programme Engg. or Product design.			
	<hr/> 13+5 T		<hr/> 400

*B. Practicals & Sessionals :*

10. Refrigeration Lab.	3	50
11. Mech. Engg. Design.	6	50
C-12. Project	6	150
D-13. Seminar	2	100
	<hr/> 17	<hr/> 500
	35 Hours	900
E-14. Practical Training Report		200
F-15. General Fitness for profession.		100
Grand Total		<hr/> 1900

\* To be declared by the Principal in the previous semester and to be offered by all students.

## THIRD B. E. (ELECT.)

## (I) First Term

<i>A. Written Papers</i>		<i>Hrs./Week</i>	<i>Exam. Hrs.</i>	<i>Marks-</i>
1. a.	Circuit Analysis I	4÷2 T	3	100
2. a.	Mathematics VII (E)	4÷2 T	3	100
3. a.	Electronics I	4÷2 T	3	100
4. a.	Strength of Materials and Theory of Structures I (E)	4÷2 T	2	50
5. a.	Electrical Machines-I	2÷1 T	2	50
<hr/>				
16÷9 T=25				<hr/> 400

*B. Practicals & Sessionals.*

6.	Electrical Engineering Laboratory I	3	—	75
7.	Workshop Practice	3	—	75
8.	Machine Drawing	4	—	100
		<hr/> 10		<hr/> 250
Part I Total		<hr/> 35		<hr/> 650

## (II) Second Term

*A. Written Papers.*

1. b.	Circuit Analysis II	4÷1 T	3	100
2. b.	Mechanical Engineer- ing III (E)	4÷2 T	3	100
3. b.	Fundamentals of Electrical Measure- ments.	3÷1 T	3	100
4. b.	Strength of Materials & Theory of Structures II (C & E)	2÷2 T	2	50

## 5. b. Electrical Machines II

2+1 T	2	50
<hr/>		<hr/>
15+7 T=22		400

*B. Practicals & Sessionals*

9.	Electrical Engineering Laboratory II	3	—	50
10.	Mech. Engg. Lab.	3	—	50
11.	Applied Mechanics Laboratory.	3	—	50
12.	Graphic Statics	2	—	50
13.	Engineering Materials Laboratory.	2	—	50
		<hr/>		<hr/>
		13		250
		<hr/>		<hr/>
	Part II Total	35		650

## C. 14. General fitness for Profession.

Grand Total 1400

## FOURTH B. E. (ELECT.)

## (I) First Term

	<i>A. Written Papers.</i>	<i>Hrs./Week</i>	<i>Exam. Hrs.</i>	<i>Marks.</i>
1. a.	Mathematics VIII (E)	3+1 T	3	100
2. a.	Electrical Machines III	4+2 T	3	100
3. a.	Transmission & Distribution of Electrical Powers.	4+2 T	3	100
4. a.	Hydraulics	3+1 T	3	100

. a. *Elective paper I\**

Instrumentation Or Electromagnetic Fields	}	4+1 T	3	100
		<u>18+7 T</u>	<u>25</u>	<u>500</u>

*B. Practicals Sessionals.*

6.	Electrical Engineering Laboratory I	3	—	75
7.	Electrical Engineering Laboratory II	3	—	75
8.	Electrical Engineering Design	2	—	50
9.	Hydraulics Machine Laboratory I	2	—	50
		<u>10</u>	<u>—</u>	<u>250</u>
	Part I Total	35		750

## (II) Second Term

*A. Written Papers.*

1. b.	Mathematics IX (E)	3+1 T	3	100	
2. b.	Electrical Machine Design	4+1 T	3	100	
3. b.	Operation & Control of Power Systems.	4+2 T	3	100	
4. b.	Water Power Engineering	3+1 T	3	100	
5. b.	<i>Elective Paper II*</i>				
	Communication Engineering	}	3+1 T	3	100
	Or Electrical Engineering Materials.				
			<hr/> 17+6 T	<hr/> 23	<hr/> 500

\*To be declared by the Principal in the previous term and to be offered by all students.

*B. Practicals and Sessionals.*

10.	Electrical Engineering Laboratory III	3	—	75
11.	Electrical Engineering Laboratory IV	3	—	75
12.	Hydraulic Machines Laboratory II.	2	—	50
13.	Electrical Workshop	3	—	50
		<hr/>		<hr/>
		11		250
Part II Total		34		750
<hr/>				
C. 14.	General fitness for profession.	—		100
<hr/>				
Grand Total				1600
<hr/>				

## FINAL B.E. (ELECT.)

## (I) First Term

*A. Written Papers.*

	Hrs/Week	Exam.Hrs.	Marks.
1. a. Control Systems	4+2T	3	100
2. a. Electrical Machines IV	3+1T	3	100
3. a. Electronics II	4+1T	3	100
4. a. <i>Elective Paper III*</i>			
Industrial Engineering Or Modern Physics.	} 4+1T	3	100
<hr/>		<hr/>	<hr/>
15+5T=20			400

*B. Practicals and Sessionals.*

5.	Electrical Engineering Laboratory I.	3	—	75
6.	Electrical Engineering Laboratory II.	3	—	75

\*To be Declared by the Principal in the previous term and to be offered by all students.



7.	Electrical Engineering Laboratory III.	3	—	75
8.	Electrical Engineering Desin.	4	—	75
		<u>13</u>		<u>300</u>
	Part I Total	<u>33</u>		<u>700</u>

## (II) Second Term

*A. Written Papers.*

1. b.	Utilization of Electrical Power	4 ÷ 2T	3	100
2. b.	Electrical Machines V	3 ÷ 1T	3	100
3. b.	Industrial Electronics	4 ÷ 2T	3	100
4. b.	<i>Elective Paper IV*</i>			
	Power Plant Engineering Or Nuclear Engineering	3 ÷ 1T	3	100
		<u>14 ÷ 6T</u>		<u>100</u>

*B. Practicals and sessionals.*

9.	Electrical Engineering Laboratory IV.	3	—	100
10.	Electrical Engineering Design.	4	—	100
C-11.	Seminar.	2	—	100
D-12.	Project.	6	—	100
	Part I Total	<u>15</u>		<u>500</u>
	Part II Total	<u>35</u>		<u>900</u>

\*To be declared by the Principal in previous term and to be offered by all students.

E-13.	Practical Training Report.	—	200
F-14.	General Fitness profession.	—	100
Grand Total			<u>1900</u>

### III B.E. (MET) FIRST TERM

#### (I) First Term

##### A. Written Paper.

No.	Subjects	Hrs/Week	Exam.Hrs.	Marks
1. a.	Introduction to Process Met.	4+2T	3	100
2. a.	Electrical Engineering	4	3	100
3. a.	Metallurgical Thermodynamics and kinetics.	4+1T	3	100
4. a.	Geology & Mineralogy	4	3	100
		<u>16+3T</u>	<u>3</u>	<u>400</u>

##### B. Practicals and Sessionals.

1.	Metallurgical Thermodynamics and Kinetics.	6	—	75
2.	Electrical Engg. and Workshop Practice.	4	—	50
3.	Geology and Mineralogy.	6	—	75
		<u>16</u>	<u>3</u>	<u>200</u>
Total		35 Hours		600

#### (II) Second Term

##### A. Written Papers.

1. b.	Introduction to Physical Met.	4+1T	3	100
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2. b.	Mathematics VII (Met)	4	3	100
3. b.	Metallurgical and Instrumental Analysis. 4+1T		3	100
4. b.	Elements of Material Science	4+2T	3	100
		<hr/>		
		16+4T		400
	Total	35 Hours		600

*B. Practicals and Sessionals.*

4.	Physical Metallurgy.	4		100
5.	Metallurgical and Instrumental Analysis	6		100
6.	Metallurgical Drawing	5		100
		<hr/>		
		15		300
	Total	35 Hours		700
C.	General fitness for profession			100
	Grand Total			1400

IV B.E. (MET)

(I) First Term

*A. Written Papers.*

No.	Subjects	Hrs./Week	Exam./Hrs.	Marks
1. a.	Ferrous Extractive Met.	3+2T	3	100
2. a.	Heat treatment and Physical Met.	3+1T	3	100
3. a.	Mineral Dressing.	3	3	100
4. a.	Non Ferrous	3+1T	3	100
5. a.	Elective Paper	3	3	100
	(a) Science of Metals.			
	(b) Small Scale Industries.			
	(c) Material Science.			
		<hr/>		
		15+4T		500

### B. Practicals and Sessionals.

1.	Heat treatment and Physical Met.	6	—	100
2.	Mineral Dressing	6	—	75
3.	Metallurgical Calculations	4	—	75
		<hr/>		<hr/>
		16		250
	Total	35 Hours.		750

## II Second Term

### A. Written Papers.

1. b.	Advanced Metallur- gical Thermodynamics.	3	3	100
2. b.	Mechanical Metallurgy—I	3+1T	3	100
3. b.	Foundry Technology.	3	3	100
4. b.	Furnace Technology.	3+1T	3	100
5. b.	Elective Paper—II	3	3	100
	(a) Experimental Techniques in met.			
	(b) Steel Foundry Practice.			
	(c) Physical Met. of nonferrous alloys.			
		<hr/>		<hr/>
		15+2T		500

### B. Practicals and Sessionals.

4.	Advanced Metallurgical Thermodynamics.	4		75
5.	Mechanical Metallurgy—I	4		50
6.	Foundry Technology.	6		75
7.	Furnace Technology.	4		50
		<hr/>		<hr/>
		18		250
	Total.	35 Hours.		750

C.	General fitness for profession.			100
	Grand Total			1600

## V B.E. (MET)

## (I) First Term

*A. Written Papers.*

No.	Subjects	Hrs./Week	Exam./Hrs.	Marks
1. a.	Metals in Industry.	3÷1T	3	100
2. a.	Applied X—rays and Physics of Metals.	3÷1T	3	100
3. a.	Industrial Metallurgy	3	3	100
4. a.	Elective Paper—III	3÷1T	3	100
	(a) Metallurgy of light metals.			
	(b) Production of Ferro-alloys.			
	(c) Advanced Foundry Technology.			
	(d) Powder Metallurgy.			
		12÷3T		400

*B. Practicals and Sessionals.*

1.	Extractive Metallurgy	6	—	100
2.	Applied X—rays and Physics of Metals.	4	—	100
3.	Metallurgical Design.	6	—	100
4.	Project.	4	—	—
		20		300
Total		35 Hours		700

## (II) Second Term

*A. Written Papers.*

1. b.	Mechanical Met—II	3÷2T	3	100
2. b.	Nuclear Reactor Met.	3÷1T	3	100
3. b.	Electro-Metallurgy and corrosion.	3÷1T	3	100

4. b. Elective Paper IV.	3+1T	3	100
(a) Advanced Aluminium Met.			
(b) Metallurgy of Copper & Zinc.			
(c) Advanced Ferrous Metallurgy.			
	<hr/> 12+5T		<hr/> 400

*B. Parcticals and Sessionals.*

5. Electricals and Corrosions.	4	—	100
6. Mechanical Metallurgy-II	6	—	100
	<hr/> .10		<hr/> 200
C. Seminar.	4		100
D. Project.	4		200
	<hr/> Total.	35 Hours.	<hr/> 900
E. General Fitness for Profession.			100
F. Practical training reports.			200
			<hr/> Grand Total
			1900

First B.E. Examination

I First Item

1. (a) *Mathematics-I*  
*Elementary vector algebra*

Definition, addition and subtraction of vectors. Scalar and vector products of two and three vectors with simple applications to mechanics.

Statics : Coplanar forces, parallel and non-parallel forces and their composition and resolution. Equilibrium of a body under three forces. Moments and couples.

*Dynamics :*

Velocity, acceleration, their composition and resolution. Relative velocity. Rectilinear motion under uniform acceleration, motion under gravity.

2. (a) *Mathematics-II**Elementary set theory*

Sets, subsets, complements. Intersection, union and products of finite number of sets, with commutative, associative and distributive laws. De Morgan's laws, Venn diagrams, correspondence, relation, function, domain and range of a function.

*Differential Calculus :*

Limits, differential coefficient. Differentiation of a sum, product and quotient. Differentiation of algebraic functions, simple trigonometrical circular functions, inverse functions and function of a function.

Geometrical significance of  $dy/dx$ . Tangents, normals sub-tangents and sub-normals. Differential coefficient as a rate measure; approximation to the roots of an equation by Newton-Raphson method. Successive differentiation, Leibniz theorem, Taylor's and Maclaurin's theorems and their applications in expansions of functions. Maxima and minima of functions of one variable or two variables connected by a relation.

*Integral Calculus :*

Integration of  $x^n$ ,  $e^{ax}$   $\log x$ , trigonometrical circular functions. Integration by parts, integration by substitution, integration by resolving into partial fractions, integration of irrational algebraic fractions, integration of transcendental functions and simple reduction formulae).

3. (a) *Chemistry-I*

## A. METALS

1. General study of the following metals and their common compounds: Sodium, Potassium, Calcium, Strontium Barium, Magnesium, Zinc, Tin and Mercury.

2. Outline of general metallurgy. Metallurgy of the following elements, their properties and common compounds uses and their alloys :

Copper, silver, Gold, Zinc and Aluminium.

## B. NON-METALS

### 1. *Inert gases :*

Discovery, isolation of Helium and Argon, their properties and uses.

### 2. *Nitrogen.*

Active nitrogen and fixation of nitrogen. Nitrous and nitric acids.

### 3. *Phosphorus :*

Extraction and properties of phosphorus, its oxides, chlorides and oxy-acids.

### 4. *Sulphur :*

Sulphuric and persulphuric acids.

### 5. *Fluorine :*

Preparation, properties and uses of fluorine and hydro-fluoric acid.

## C. GENERAL

### 1. *Atomic Structure :*

Simple concept of atomic structure (Rutherford and Bohr models), Bohr Bury Scheme for the distribution of electrons, shells and sub-shells.

### 2. *Valency :*

Development of concept of valency including a simple treatment of electronic & theory of valency (Electro-valency, Covalency, Coordinate-covalency and Singlet linkage), Hydrogen Bond.

### 3. *Radioactivity :*

Natural radioactivity, alpha, beta and gamma rays, Artificial disintegration of elements and induced radioactivity. Elementary idea of isotopes and isobars.

### 4. *Periodic classification of elements.*

General idea about periodic classification of elements.



### 5. Calculations :

Problems based on chemical equations and volumetric calculations.

## 4. PHYSICS-I

### *General Properties :*

Force, Work, Power, Kinetic and Potential Energy, Units, Circular motion, Measurement of acceleration due to gravity by simple pendulum and its variation. Elastic constants and their inter-relation (without derivation) Determination of Young's modulus, Isothermal and adiabatic elasticities of a gas. Surface tension, angle of contact, rise of liquid in capillary tube, Experimental determination of surface tension of water by capillary rise method and detachment of a glass plate method. Viscosity of water, its determination by method of Flow through a capillary tube (without derivation).

### *Heat :*

Specific heats of gases and their determination by Joly's steam calorimeter and Regnault method. Ratio of two specific heats of a gas and its measurement by Clement and Desormes's method. Kinetic Theory of gases Kinetic interpretation of temperature. Specific heats of an ideal gas, Equipartition of energy.

Internal energy, first law of thermodynamics, Adiabatic, Isochoric, Isobaric and throttling processes. Determination of J by Searle's method.

Newton's law of cooling and its derivation from Stefan's law. Conductivity of good and bad conducting solid and its determination for copper by Searle's method.

### *Magnetism :*

Magnetic potential and intensity due to a short magnet at any point. Work done in rotating a magnet. Theory and uses of deflection and vibration magnetometers. Terrestrial magnetism. Magnetic Elements and their determination.

### *Electrostatics :*

Capacity of spherical, parallel plate and cylindrical condensers in series and parallel. Electrostatic Potential, Electric dipole, Electric potential and intensity due to a dipole. Dielectric constant. Gauss's theorem and its applications. Coulomb's law. Forces on the surface of a charged

conductor. Energy in an Electric Field. Idea of displacement current.

## II Second Term

### 1. (b) *Mathematics—III :*

#### *Statistics :*

Conditions of equilibrium of a body under a system of coplanar forces; simple examples. Centre of gravity friction, work and power, systems of pulleys.

*Dynamics* Newton's of motion, rectilinear motion of two masses connected by a string passing over a pulley. Impulse, work, power and energy.

### 2. (b) *Mathematics—IV*

#### *Algebra :*

Determinants—Properties, products of determinants, their applications to simultaneous algebraic equations and elimination.

#### *Grants :*

Graphs of  $x^n$ ,  $e^{ax}$ ,  $\log x$  and trigonometrical function, applications of graph to solution of equations and to the determination of laws from data.

#### *Co-ordinate Geometry :*

Change of axes, circle, parabola, ellipse and hyperbola with simple properties: simple examples (to be treated by rectangular cartesian co-ordinates only).

#### *Trigonometry :*

Complex numbers and their graphical representation. De Moivre's theorem and its applications. Hyperbolic functions and inverse hyperbolic functions. Separation of real and imaginary parts of a complex quantity. Summation of trigonometrical series.

## CHEMISTRY III

### Physical & Organic Chemistry

#### *I. Physical :*

1. Chemical Equilibrium; Law of Mass Action and its simple applications; Le Chatelier's principle.

2. Theory of dilute solutions, osmotic pressure and its determination; determination of molecular weight from osmotic pressure abnormal osmotic pressure; lowering of vapour pressure and its relation with osmotic pressure. Molecular weights of dissolved substances by Elevation of boiling point and Depression of freezing point. Abnormal molecular weights and degree of dissociation.
3. Ideal gases, kinetic theory of gases, fundamental equation from Kinetic theory and its use in deducing gas laws, gas equation and Graham's law of diffusion. Deviations from gas laws and Vander Waal's equation of State, Critical phenomena and Law of corresponding states.
4. Colloids, classification, methods of preparation, properties; coagulation of colloids and Hardy-Schulze Law, gold number and uses of colloids.
5. Catalysis, classification, theories and industrial applications.
6. Elementary idea of PH and its determination.

## II ORGANIC

1. Definition and scope of study. purification of organic compounds and their elemental analysis.
2. Determination of molecular formula by vapour density, silver salt and platinum chloride methods.
3. General methods of preparation and important properties of the following compounds :
  - (a) Methane, ethane, ethylene and acetylene.
  - (b) Methyl and ethyl halides.
  - (c) Methyl and ethyl alcohol.
  - (d) Formaldehyde, acetaldehyde and a ketone.
  - (e) Formic acid, acetic acid, acetyl chloride, acetic anhydride, acetamide, ethyl acetate, soap manufacture.
  - (f) Methyl and ethyl amines.
  - (g) Diethyl ether.

(h) Glycerol.

(i) Urea.

(j) Benzene from coal tar, toluene, phenol, nitro-benzene, aniline benzaldehyde, benzoid acid.

### 5 a ENGLISH-I

- (a) A short novel for nondetailed study.
- (b) About 300 lines of poetry.
- (c) Grammatical structures of modern English.
- (d) Comprehension.

1971-72

#### *Books prescribed :*

- (a) Dead on Time—John Gilbraith
- (b) The following Selections from *English For Today*  
(Book Six) Edited by Luella B. Cook,  
Mc Graw-Hill, New York.
- (1) The Death of the Hired Man. : Robert Frost
- (2) Fire and Ice. : Robert Frost
- (3) The Laws of God, the Laws of Man : A.E. Housman
- (4) The Man He Killed. : Thomas Hardy
- (5) When I heard the Learned Astronomer. : Walt Whitman

#### *Books Recommended :*

- (1) An Intermediate English Practice Book : Pit Corder
- (2) Groundwork of English Sentence Structure. : Clarks
- (3) The Advanced Learner's Dictionary. : Hornby et al.

### 5b ENGLISH-II

- (a) Prose selections—Essays. Short stories. One act plays etc. (About 100 Pages).

- (b) Technical exposition of the principles and working of simple scientific and technical devices like a clinical thermometer, Fortin's barometer, photographic camera, electric iron, putting in a fuse wire etc.
- (c) Descriptive Exposition.
- (d) Precis writing.

*Book Prescribed :*

- (a) The following selections from *English For Today*,  
Ed. Luella B. Cook, Mc Graw Hill, New York.
- (1) The Open Window. : Saki
- (2) The Snob. : Morley Callaghan
- (3) The Sculptor's Funeral : Willa Cather
- (4) Speech on receiving the Nobel Prize. : W. Faulkner
- (5) Delight (Dreams, Transport in Films,  
Reading in Bed about Foul Weather,  
Giving Advice and Departing  
Guests). : J.B. Priestley
- (6) The Will. : J.M. Barrie.

*Books Recommended :*

- (1) Preparatory Technical English : G.A. Pitman  
(Longmans)
- (2) On Your Own : Wright and  
Wallcock (Longmans)
- (3) The Advanced Learner's Dictionary : Hornby et.al.  
(Oxford)

FIRST B.E. (All Branches)

I First Term

8. *Practical Geometry I*

- 1. Introduction of Instruments and materials used in Drawing.
- 2. Lettering.
- 3. Scales—Simple, Diagonal and chord scales.
- 4. Conic Sections such as ellipse, parabola, hyperbola, cycloids and tractoids.

## 5. Projections of points and lines.

Orthographic projections of simple solids such as prisms, pyramids, cylinders and cones. Auxiliary projections.

## II B.E. Examination (All Branches)

1. (a) *Mathematics V**Solid Co-ordinate Geometry*

Cartesian co-ordinates in space, direction cosines. Equation of a plane and the general equation of the first degree in three variables. Angle between two planes, perpendicular distance of a point from a plane, equation to plane bisecting the angle between two planes, intersection of a plane and a straight line. Angle between two straight lines, shortest distance between two non-intersecting straight lines in space.

Equation and simple properties of spheres, cylinders and cones. Tangent planes and normal lines (equations in the simplest forms).

*Differential Calculus :*

Curvature, concavity, convexity and points of inflexion (Cartesian co-ordinates only). Asymptotes, simple curve tracing (Cartesian and standard polar curves-Cardioid, Limniscate of Bernoulli, Limacon and Equiangular spiral).

Functions of two or more variables, partial differentiation Calculation of small errors.

*Integral Calculus :*

Definite integrals, use of Gamma function without proof. Integration as the limit of a sum. Applications of integral calculus-lengths and areas of simple plane curves, volumes and surfaces of solids of revolution and centre of gravity of symmetrical bodies. Simpson's rule.

Easy double and triple integrals with application to volume and surfaces.

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I.B.E. (All Branches)

II Second Term

*14. Machine Drawing I*

*Introduction* : Conventional representation of lines and materials. Dimensioning—notations and placing general rules of dimensioning.

*Orthographic projection* : First and third angle method.

Sectional drawings of Simple machine parts, like bush bearing, smallbrackets, levers etc. and (ii) Rolled sections: Flate, round square, Pipe, angle channel, T-Section, Z-Section, I-Section.

*Fastners* : Rivets : Types of rivets, riveted joints, lap butt and typical but simple joint connections. Screw threads : 'V' type threads; I.S. Whitworth, B.S.W. B.A. American National threads.

Equare, acme. buttress, knuckle, Right and left hand threads multistart threads.

Bolts and nuts : types of bolts, nuts and washers. Locking devices of nuts.

Types of studs and set screws. Foundation bolts.

Pins : Uniform, taper and split pins.

Keys : Types of keys, spline shaft.

Simple cotter, knuckle and Hookes joint.

*Simple bush and foot-step bearings* : Sketchwork : free hand sketching.

Note : In all above topics ISI specifications IS : 593—1961 should be followed.

## 30 Engineering Physics

*Magnetism*

Magnetic shell, potential due to a magnetic shell, field at an axial point of a flat circular magnetic shell. Field lines, equipotential surfaces and their equations. Magnetic induction, Permeability, Intensity of magnetisation, Derivation of  $B = \mu_0 \mu_r H$ . Magnetic permeability, suceptibility, and mag-

netic hysteresis. curves—Loss of energy in hysteresis. Cycle Uses of hysteresis curves. Methods of determining the circuit, magnetic properties of materials, Ewings hysteresis tester Magnetic motive force, Reluctance.

### *Electromagnetism*

Ampere's theorem of equivalence. Magnetic potential and field due to electric currents. Line integral of Magnetic field. Magnetic field due to straight current, straight solenoid and end less solenoid. Force on a current in magnetic field. Action of current on current. Moving coil ballistic galvanometer Damping, Logarithmic decrement. Calibration of ballistic galvanometer. Comparison of capacities.

### *Thermo electricity:*

Seebeck, Feltier and Thomson effect. Laws of thermo electricity. Application of thermodynamics to a thermo couple. Thermoelectric power. Thermoelectric diagrams and their uses.

### *Wave Theory*

Wave theory of light. Huyghen's principle of wave propagation, explanation of rectilinear propagation, reflection and refraction. Total internal reflection and refraction through a lens.

### *Interference*

Conditions of interference. Calculation of path difference Biprism and determination of wave length. Lloyd's single mirror, white light fringes, achromatic fringes. Displacement of fringes by their transparent sheets and measurement of thickness of their sheets, Colour of their fringes. Newton's rings and determination of wavelength by Newton's rings.

## B. E. II Year

### 2. a. Engineering Chemistry I

#### *Water*

*Municipal Supply water:* Sources of water, requisites of drinking water, purification, filtration and sterilisation.

*Water for boilers:* Boiler feed water, hardness temporary and permanent, Boiler scales, their formation, types and their effect on boilers.

Water softening and demineralisation: Chemical and ion-exchange methods. Internal treatment of boiler compounds. Effect of oil and dissolved silica on boiler and methods for their removal. Boiler corrosion and its prevention. Caustic embrittlement, foaming and priming.



Calculation of water treatment problems based on lime soda process.

*Corrosion:* Theories of corrosion, Chemical and electro-chemical methods of preventing corrosion.

*Paints varnishes and lacquers:* Definition, their constituent and different varieties including utilisation.

*Refractories:* Definition, classification, production and utilisation.

*Glass :* Varieties, preparation, properties and uses.

*Cement:* Manufacture of cement, chemistry of setting of lime and cement and their chemical composition.

*Phase Rule:* Meaning of the terms involved in the rule. Application of the rule to one component system: Water system and sulphur system.

*Chemical Kinetics:* Order and molecularity of a reaction; first and second order reactions. Determination of the order of a reaction. Energy of activation and Arrhenius equation.

#### 4. a. Electrical Engineering

1. Fundamental circuit law; Kirchhoff's Laws. D.C. circuit Network Simplification—Principles of Superposition, Thevenin's Theorem.

2. Generation of alternating voltage—sinusoidal voltages and currents Purely resistive A.C. circuits. RMS value self inductance, Growth and Decay of current in inductive circuit Purely inductive A.C. circuits—capacitance—charging and discharging of condensers purely capacitive AC circuits.

3. Phasor representation of alternating quantities rectangular Polar and Exponential forms—impedance concept.

4. Series and parallel circuits involving R. L. and application of complex Notation.

5. Power and Reactive power, power factor and voltamperes—power factor correction—Frequency response and resonance.

6. Electrochemical energy conversion—voltage and Torque interaction of magnetic fields—elementary ideas of AC and DC Generators and motors.

7. Working Principles of moving coil, Moving iron and dynamometer type of ammeters and voltmeters. Wattmeters, measurement of power in single phase circuits.

### 5. a. Machine Drawing-II

*Bearings:* Plummer block. Ball, roller and needle bearings.

*Shaft couplings:* protected type, flange couplings, muff type pin type flexible couplings.

*Pipes and pipe joints:* Spigot and socket type, flange wiped, lens and union type joints.

Standard pipe fittings: elbow, bend tee, cross union, plug, socket, reducer.

Valves: stop globe, gate check butterfly, needle types of valves.

Layout of pipings: Single line double line with standard conventions for pipe fittings, valves and supports.

*Welding drawings:* welding symbols for arch gas and resistance weldings. Different types of typical welded joints.

*Belts and Pulleys:* Types of pulleys and belts. V-belt, flat belt, rope, Pulleys: Fast and loose, Jockey pulley.

Bottle screw jack, simple chain pulley block with hook. connecting rod of air compressor.

Line diagram of different hydraulic servo-mechanisms and drives.

*Note:* In all above mentioned topics I.S.I. specifications IS-596-1961 should be followed.

### 6. a. MECHANICAL ENGINEERING-1

*Thermodynamic Properties of ideal gases and vapour:*

Perfect gases, equation of state, gas constant universal gas constant, work done and qualitative change in heat during constant volume, constant pressure, isothermal adiabatic, isentropic, and polytropic processes. Introduction to the concept of entropy.

Steam as a perfect vapour, sensible latent and super heat. Phenomenon of critical state. Simple explanation of ideal processes, hyperbolic process and throttling.

Introduction to steam tables T- $\phi$  diagram mollier chart and psychrometric chart for air.

*Prime movers:* Classification—external and internal combustion engines, reciprocating and rotary prime movers. Stationary, portable and propulsive applications, concept of Mech. thermal and overall efficiency.

*Boilers:* Types of fuels used. Description of methods of producing draft. Basic classification of smoke tube, water tube, high pressure and supercritical boilers, Package boilers, Nominal H. P. of boilers Introduction to boiler mounting and accessories. Fuel burning equipment.

*Steam Engines:* Brief description, general arrangement of parts, single and double acting, simple and compound engines. Multicylinder engines.

*Steam Turbines:* Concept of impulse and reaction principle. Schematic diagram and applications. use of condensers. Schematic layout of thermal and nuclear power plants.

## II Second Term

### 1. (b) *Mathematics-VI*

#### *Differential Equations*

Differential equations of first order and first degree, linear differential equations of higher order with constant coefficients, homogeneous linear differential equations.

#### *Statistics*

Stable and unstable equilibrium, principle of virtual work, common catenary of uniform strength.

#### *Dynamics*

Angular motion, radial and transverse velocities and accelerations, tangential and normal acceleration. Rectilinear motion, projectiles, circular and cycloidal motion, motion on simple smooth curves.

## 26. Engineering Chemistry II

### *Fuels:* Classification.

*Solid Fuels:* Coal and its classification, utilisation and analysis. Gross and net calorific value and its determination by bomb-calorimeter.

Production of coke-hard and soft, bye product of carbonization of coal and other products.

*Liquid fuels:* with special reference to petroleum products. Petroleum industry.

*Gaseous Fuels* Production, Utilisation and analysis (orsat gas analysis apparatus).

*Calorific value of gaseous fuels:* Junker's Calorimeter. Analysis of fuel gas and interpretation of result.

*Lubricants:* Classification, properties of lubricants and their tests.

*Plastics:* An elementary idea of plastics, thermoplastics and thermosetting plastics.

*Rubber:* Natural and synthetic rubbers, vulcanisation and uses.

*Electrochemistry:* Conductivity of electrolytes, specific, equivalent and molecular conductivity, Effect of dilution, Relative speed of ions during electrolysis; Transport number and its determination, Kohlrausch law and its applications.

*Thermochemistry:* Hess's Law and constant heat summation. Heats of 1) reaction, 2) combustion at constant pressure and constant volume, 3) formation, 4) Neutralisation, 5) Solution, 6) Dilution and 7) Ionisation. Temperature coefficient of heat of reaction.

## Engineering Physics-II

### *Diffraction:*

Fresnel and Fraunhofer types. Fresnel diffraction at straight edge. Fraunhofer diffraction by rectangular slit and circular hole. Plane diffraction grating, Rayleigh's criteria of resolution, resolving power of telescopes and microscopes, and plane diffraction grating.

### *Polarisation:*

Methods of producing polarised light by reflections, refraction, double refraction and selective absorption. Nicol prism, polaroids. Quarter and half wave plates. Production and detection of plane, elliptical and circularly polarised light. Optical activity. Specific rotation and Laurent's half shade polarimeter. Elementary ideas of photoelasticity.

*Modern Physics:*

Discharge of electricity through gases. Cathode rays and positive rays. Ratio of charge to mass of an electron by Thomson's method. Millikan's oil drop method for determination of charge on an electron Thomson's parabolic method for positive rays, Aston's and Bainbridge mass spectrograph.

Structure of atom, classical and modern ideas about nucleus. Bohr's theory of hydrogen spectrum and energy level diagram. Photoelectric effect and photocells. Van de graff generator. Artificial radioactivity, nuclear fission and fusion (ideas only).

## 4. a. Basic Electronics.

1. *Electro Emission*:—Elementary ideas and thermionic emission, Secondary emission, field emission and photo emission.

2. *Electro Tubes*:—Basic ideas of construction and characteristics of Diode, Triode, tetrode, photo tube, & Cathode Ray Tube.

3. *Basic Amplifiers*:—Simple equivalent circuits, classification of amplifiers, Analysis of R. C. coupled amplifiers, Elementary ideas about various other amplifiers.

4. *Rectifiers*:—Operation of Half wave and full wave rectifiers and filters.

5. *Oscillators*.—Operation of basic types of inductance capacitance oscillators.

6. *Transistors*.—Basic ideas about semiconductors and transistors, Description of simple transistor amplifier circuits.

7. *Electronic Measuring Instruments*:—General principle of Cathode Ray Oscilloscope and Vacuum tube voltmeters and their simple applications.

## 5. b. Practical Geometry II

Involute, Helix—Spirals and cams. Auxiliary Projections, Section of Solids, Projections of Solids in various places and in various positions. Development of Surface Simple cases of interpenetration of Solids.

## 6 (b) Mechanical Engineering II

*I.C. Engines* : Classification; otto diesel and dual combustion cycle, two and four stroke operation, water and air cooling. Multicylinder engines. Elements of carburetion, spark ignition and fuel injection. Application of I.C. Engines, their speed and power limits, type of construction in each application.

*Gas Turbine and Jet Propulsion* : Elementary concepts only. Application for propulsion of air-crafts, air cushions, vehicles missiles and space crafts.

*Propulsion systems* : Schematic layout and working of propulsive system of automobiles, earth moving machines, ships, air crafts and helicopters.

*Lubrication* : Properties and tests for lubricants, methods of lubrication, forced lubrication system.

*Refrigeration and air conditioning* : Elementary concept of working principles and schematic layout of refrigerators air coolers, air conditioners and ice plants.

## III B.E. Examination

(Civil Branch)

## I First Term

1. (a) *Mathematics VII C.**Infinite Series*

Simple tests for convergence, Fourier series and Harmonic Analysis.

*Complex Variables :*

Analytic functions, Cauchy-Riemann conditions, Cauchy's integral theorems, elementary conformal mapping.

*Spherical Trigonometry*

Spherical triangle, formulae connecting sides and angles.

*Matrices :*

Definition, Addition, subtraction and multiplication

of matrices. Transpose, conjugate, adjoint and inverse of a simultaneous equations.

### *Vector Calculus :*

Vector and scalar point functions. Gradient, Curl, and Divergence. Line, volume and surface integral. Gauss's Stokes and Green's theorems.

### *Differential Equations :*

Partial differential equations of first and second order. Solutions of Laplace and Wave Equations.

## 2 a Surveying I

### 1. Survey Instruments and Equipment :

Different types of tapes and chains and their uses. Constructional details and operation of prismatic compass, Dumpy level. Vernier theodolite. Refinements incorporated in modern theodolites (Wild T<sub>2</sub>, Tavistock). Principle and use of gradiometer, Surveyor's compass, tachometers, subtense bar, tangential tachometer, Aneroid barometer.

Permanent adjustment of Dumpy level and vernier theodolite.

### Traverse Surveying :

Different types of traverse surveying, magnetic north, true north, declination, dip, bearings, local attraction, loose needle and fast needle, measurement of horizontal and vertical angles, computation of different types of traverses. Graphical and Analytical methods of traverse adjustment. sources of errors in theodolite and tachometric traverses, Area of closed traverse.

### 3. Levelling :

Definition of various terms in levelling, Different types of levelling, sources of error in levelling, curvature and refraction, Angular measurement for levelling (a) By single observation and (b) By reciprocal observations.

Orders of precision, Equipment for Geodetic levelling. Field procedure of Geodetic levelling, computation and adjustment of levels.

### 4. Curves setting out :

Elements of simple, compound, Reverse and transition

curves, super elevation, Length of transition curves, vertical curves, Methods of setting out different types of curves.

### 5. Topographic surveying :

Methods of representing relief on a map. Characteristics of contours, Methods of contouring, application of air photographs for contouring, use of contour, Methods of plotting details.

### 6. Hydrographic surveying :

Determination of M.S.L., Methods of locating soundings. shore line survey.

### 7. Photogrammetry :

Determination of horizontal and vertical angles from terrestrial photographs, Photo-theodolite, scale of vertical photograph, Relation between principal point, plumb point and isocentre-Height of object from relief displacement; drift and effective coverage of the photograph.

## 3. a Building Construction

### A. Foundations :

Purpose of foundations, cause of failure; principles of design of foundations; safe permissible loads on different soils, safe compression stresses in masonry and concrete; weights of different materials; equipment dead loads on floors of buildings. Examination of ground. Testing bearing capacity of soils.

Methods of providing foundations to structures; spread forces for walls, columns. Grillage foundations, pile driving machinery, bearing power of piles, grouping of piles and pile caps.

Pile foundations, different types of pile foundation, pile driving machinery, Bearing power of piles, grouping of piles pile caps.

Loose soil and dry excavation; concrete and its use in foundations.

General information regarding fitting and type of foundations.



*(B) Partitions :*

Brick partitions, lathe-wood, steel and plaster, Hollow tile partitions, Fibre board, Board partitions, wooden trussed partitions; glazed partitions; sound proof partitions.

*(C) Doors and Windows :*

Door-panelled, half glazed, and half panelled; flush doors, sliding doors; folding doors, steel doors and different fixtures and fastenings of doors and windows; windows—Bay windows, Dormer windows, Sash window, Steel windows, Sky lights.

General idea regarding types of doors and windows and their parts. Details of fixing them in masonry. Details of carpentry joints in doors and windows.

*(D) Stair cases :*

Technical terms defined : purpose and location. Materials of stairs, stone, timber, concrete : different forms of stairs. Construction of wood : stone and concrete stairs.

*(E) Brick masonry :*

Definition : General principles to be observed in brick masonry construction; Bonds in brick work; English bond Flemish bond; Comparative merits and demerits of Flemish bond and English bond. Tee-junctions; square junction; Piers attached to main walls; Tools of brick layer. Brick pillars—1,  $1\frac{1}{2}$  brick.

*(F) Stone Masonry :*

Definition; Comparison between stone-masonry and brick masonry; Technical terms used in masonry; stone masonry; Dressing of stone setting of stone work; Joints in stone masonry; General principles to be observed in stone masonry Construction; classification of stone masonry.

*G. Damp Proof Course :*

Definition; Causes, effects and prevention of dampness; water proofing mixture, water proofing of roofs.

*H. Ground floor :*

Concrete, masonry paved, terrazzo floor, tile floor, mosaic floor upper floors—single floor, double floors, framed floors,

timber floors ceilings, closed and open ceiling, sound proof floors.

### 1. *Composite floor :*

Double flag stone floor, jack arch floor : filler joint floor, reinforced brick floors; encased steel floors, R.C.C. floor, Hollow floor, presase beam floor.

### 2. *Arches and Lintels :*

Arches—Dfferent types of arches. terms used stone and brick arches, construction of arches. Limit—wood, stone brick and R.C.C. lintels and the construction.

3. General principles of machinery foundations, fixing of machinery, vibrations and their prevention. Methods of isolating vibrations due to machinery.

### 4. *Roofs :*

Definition, Main divisions-pitchod, sloping that verandah roof, occupied, close coupled, collar beam, collar and the beam roofs. Details of queen post and king post trues and line diagrames of different steel trusses.

### 4. a. Strength of Materials & Theory of Structures-I

- (a) Stress and Strain-Hooke's Law, tension, compression and shear, complementary shear stress. Poisso's ratio, Elastic constants and their relations for an isotropic material. Temperature stresses and composite bars. Elastic and plastic behaviour and common materials in tensiles and compressive tests, characteristic stress strain curves. Ultimate strength Working stress and factor of safety. Resilience and suddenly applied loads.
- (b) Principal planes, stress and strains, ellipse of stress, ellipse of strain. Mohir circle diagram. Theories of elastic failure.
- (c) Thin cylinders and shells-stresses and starins in thin cylinders and spherical shells.
- (d) Bending moment and shearing force diagrams under static loads concentrated, uniformly distributed and uniformly varying loads on cantilevers, simply supported and overhanging beams. Theory of simple

bending, distribution of normal stress due to bending, Section modulus.

- (e) Shear stress distribution in rectangular, circular, tee and I sections.

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## 5. a. APPLIED MECHANICS

### 1. *Rigid dynamics :*

Moments and products of inertia.

'Alembert's principal in rectilinear, rotary, and relative motion.

Kinematics of curvilinear motion,

Force, space, velocity and acceleration diagrams plotted to time and space base.

### 2. *Rotary motions :*

Couples, torque and angular acceleration.

Kinetic energy of translation and rotation.

Effect of moment of inertia and radius of gyration on machine motion Flywheels.

### 3. *Lifting Machines :*

Mechanical advantage, velocity ratio and efficiency. Law of machine. Effort lost in friction.

Study of screw jack-differential & compound, differential wheel and axle, pulley blocks, winch crab-single and double.

### 4. *Theory of Machines :*

Transmission of power by belts, ropes and chains. Length of belts, tension in belts, centrifugal tension. Maximum power transmitted by belts.

### 5. *Force systems in space :*

Concurrent and non-current forces. Parallel and non-parallel forces. Couples in space. Composition and resolution of force and couples in space. Equations of equilibrium.

## II Second Term

### 1. (b) *Mathematics VIII C.*

#### *Rigid Dynamics :*

Moments and products of inertia, D 'Alembert's principle, Motion about a fixed axin Simple cases of motion of a rigid body in two dimensions (finite forces).

#### *Nomography :*

Theory and simple applications of nomograms.

#### *Laplace Transforms :*

Laplace Transforms, elementary rules, applications to solution of second order differential equations with constant coefficients.

#### *Numerical Analysis :*

Finite differences, forward and backward differences, Newton's forward and backward difference interpolation formulae, Numerical differentiation and numerical integration (Trapezoidal rule and Simpson rule).

Solution of first order differential equations by methods due to Piccard, Runge-Kutta.

#### *Statistics and Probability :*

Frequency distributions—mean, standard deviation, Theoretical definition and empirical measure of probability, expected value. Theoretical probability distribution; Binomial Normal and Poisson's distributions.

### 12. English and Humanities-I

#### *Written English :*

- (a) Advanced Precise writing.
- (b) Business letters.

#### *Spoken English :*

- (a) Elements of English phonetics and introduction to International phonetic symbols.

#### *Social Sciences :*

- 1, Democracy.
2. Totalitarianism.
3. Capitalism.

4. Socialism.
5. Mixed Economy.
6. The Renaissance in Europe.
7. The Industrial Revolution in England.

### 17. English and Humanities-II

#### *Written English :*

- (a) Elements and format of technical report writing.
- (b) Essay writing on technical and semi-technical topics.

#### *Spoken English :*

- (a) Transcription.
- (b) Aural comprehension.
- (c) Laboratory practice in stress and intonation.

#### *Social Sciences :*

1. Ancient Indian Culture and Civilization and their impact on South East Asia.
2. The Indian National Movement from 1885.
3. Special Features of the Indian Constitution.
4. India after Independence.
5. Industrialization of India after Independence.

### 26—Hydraulics

1. *Fluids*—Definition; Ideal Fluids, Real Fluids, Newtonian and Non-Newtonian Fluids.
2. *Properties of Fluids*—Units of measurement, Mass Density, Specific weight, specific volume, Specific Gravity, Viscosity, Surface tension and Capillarity, Compressibility and Elasticity.
3. *Hydrostatics*—Pressure at a point in a static fluid; Pressure variation in an incompressible static fluid, Atmospheric pressure, Gauge pressure, Vacuum pressure, Absolute pressure, Manometers, Bourdon tube pressure gauge, Forces acting on immersed plane surfaces, Centre of pressure, Forces on curved surfaces.

Buoyancy—conditions of equilibrium of floating bodies, Meta-centre and Metacentric height, Experimental and Analytical determination of metacentric height.

Relative Equilibrium—Fluid masses subjected to horizontal and vertical accelerations and uniform rotation.

4. *Hydro-kinetics*—Types of flows—Steady and Unsteady, Uniform and Non-uniform, Stream lines, Path lines, Streak lines and Stream tubes, Principle of conservation of mass—Equation of continuity, Acceleration of Fluid particles Local and convective, Rotational and Irrotational motions, Free and forced vortex, circulation and vorticity, Velocity potential and Stream function, Elementary treatment, of flow net.

Euler's equations of motion and integration of Euler's equations, Energy equation for compressible and incompressible fluids—Bernoulli's equation, Assumptions in Bernoulli's equation, Energy correction factor.

5. Applications of Bernoulli's Equation—Pressure distribution in irrotational flow Pitot tube, Venturimeter, Orifice meter, Orifices and Mouthpieces Submerged orifices, Large orifices, Time of emptying tanks by orifices.

Rectangular, Triangular and Trapezoidal notches, Francis formula, Velocity of approach, End contractions, Cippolletti weir, Broad Crested Weir, Submerged weir, Modular limits, Time of emptying reservoirs by weirs.

6. *Momentum equation and its application*—Development of momentum equation by control volume concept, Momentum correction factor, Applications—Borda's mouthpiece, Sudden enlargement of flow, Pressure on flat plates, Nozzles.

7. *Flow in pipes*—Laminar flow, Reynolds experiment, Relation between shear and pressure gradient, Hagen Poiseuille equation, Stokes Law, Transition from laminar to turbulent flow.

Turbulent flow—Laws of fluid friction, Loss of head due to friction and other causes, Hydraulic gradient, Total energy line, Chezy's, Darcy's and Manning's formulae, Flow through parallel pipes and pipes in series, Flow through branched pipes, Flow along a by-pass, Power transmission through pipes, Condition for maximum power.

8. Elementary concept of boundary layer theory. Forces on immersed bodies—Drag and lift, flow past a cylinder, a flat plate and an airfoil. Drag and lift coefficients.

9. *Reciprocation pumps*—Constructional features and working. Slip, coefficient of discharge. Acceleration head. Effect of friction in suction and delivery pipes. Air vessels, work saved by fitting an air vessel. Pump duty.

### 3b—GEOLOGY

#### *Introduction :*

Object and scope of geology,. Interior of earth.

#### *General Geology :*

Weathering and their agents, geological work of glaciers rivers. Wind lakes and sea-Earthquake and volcanoes.

#### *Structural Geology :*

Dip, Strike, bedding, out crop, folds, faults and their classification and recognition. Unconformity, outlier and inlier dyke, still, batholith, localities, stock and boss.

#### *Mineralogy :*

Physical properties of minerals and study of quartz. Orthoclase, Microcline, Tourmaline, Muscovite, Biotite, Hornblende, Olivine, Augite, sodalite, Garnet, Apatite. Talc, Kyanite, Calcite, Dolomite, Baryte, Chalcopyrite, Pyrite, Magnetite, Hematite, Galena, Sphalerite, Pyrolusite, Graphite, Orpiment and Realgar, Megascopically (in hand specimen).

Use of polarising microscope and study of Quartz, Orthoclase, Muscovite, Biotite, Hornblende, Augite, Hypersthene, Microcline, Olivine, Albite, Granite, Rhyolite, Dolerite and Basalt, under microscope.

#### *Petrology :*

Formation, origin and classification of sedimentary, metamorphic and igneous rocks, their uses and construction material.

### *Historical Geology :*

Elementary principles of stratigraphy, standard stratigraphical scale and the details of Arvalli, Delhi and Vindhyan systems. Occurrences of building and construction materials in India.

### *Engineering Geology :*

Importance of geology in Civil Engineering, Geological investigations and their influence on the selection, location and types of dams, reservoir tunnels and piers precaution and treatment against faulting, folding, joints and ground water, land slides and hill slopes.

### 4b—STRENGTH OF MATERIALS AND THEORY OF STRUCTURE—II

- (a) Relation between load, Shearing force, bending moment, slope and deflection. Slopes and deflection of cantilevers and simply supported beams by Macaulay's conjugate beam and moment area methods, plate springs.
- (b) Combined bending and direct stress—Eccentric loading—wind pressure on walls and chimney shafts—Wates pressure.
- (c) Torsion—Shear stress in solid and hollow circular shafts; angle of twist, power transmitted by a shaft under pure torsion. Combined bending and torsion and axial thrust.

Stress and deflection of closely coiled circular section springs.

- (d) Columns and short columns, axial and eccentric loading, ideal strut, Euler's formulae for crippling load, end conditions and equivalent length of struts Rankine. Gordon, Parabolic and straight line formulae. Perry's formulae.
- (e) Framed structures Pinned plane frame, perfect frames subjected to static loads. Determination of reactions at supports and forces in members.
- (f) Rivets and riveted joint—Rivet value, minimum and maximum pitches, safe edge distance. Splicing of a plate or plates. Eccentrically loaded joints.



## 5b MECHANICAL ENGINEERING-I

*Mechanical fabrication processes :*

Riveting-hot and cold welding, gas and electric arc. Electrodes and their selection, position welding and welded joints; Plumbing. Sheet metal working, pneumatic tools for ramming riveting, vibrating, chisels.

*Mechanical Handling :*

Basic constructional features and principle of working of conveyors, Elevators, Fork-lifts trucks, cranes, crabs and winches.

*Earth moving equipment :*

Basic constructional features and principle of working of Shovels, Graders and Buidozers.

*Irrigation Machinery :*

Types of pumps used for low and high head, small and large discharge service. Construction and principle working. Starting, stoping, operation and maintenance of pumps. Pump characteristics, specifying the pump for different service. Selection of drive for the pump; diesel engine and electric motors. Specifying the drive.

*Agricultural equipment :*

Basic constructional features and principle of working of tractors, crawlers and their implements drewbers, Power take-off shafts, Harrow. Ploughs and mawathrashers.

Elements of heating, ventilation and air-conditioning and load calculations. Heating systems, ventilation systems. Principles of air conditioning. Application to community and residential buildings. Application of refrigeration in construction of dams, tunnels and skating rings.

## Ia THEORY OF STRUCTURES (I) FIRST TERM

(a) Fixed and continuous beams : Method of consistant deformations. B. M. and S. F. diagrams for static loading. Analytical and graphical determination of slope and deflection under simple loading. Theorem of three moments. Slope-deflection and Moment distribution methods.

(b) Application of slope-deflection and moment distribution methods to portal frames without inclined members. Sway correction.

(c) Rolling loads on beams. Shear forces and bending moments due to concentrated loads, uniformly distributed loads longer and shorter than span. Equivalent uniformly distributed load. Graphical methods.

(d) Influence lines for shear force, bending moment, and deflection for beams (simply supported, fixed and continuous). Maxwell's law of reciprocal deflection. Muller-Braslaw principle.

(e) Determination of slope by the unit couple method and deflection by unit load method. Deflection due to impact load and due to shear. Castigliano's first theorem. Deflection of framed structures. Perfect frames-Analytical and graphical method of finding deflection. Williot-Mohr diagrams.

(f) Redundant frames: Castigliano's second theorem. Principle of minimum strain energy. Application to frames with one and two redundant members, trussed beam, two hinged arch and portal frames.

(g) Arches: metal arch, linear arch. Eddy's theorem. B.M. S.F. and thrust in three hinged arch with and without braces. Graphical method. Moving loads on three hinged and two hinged arches. Rib shortening and temperature stresses. Fixed arch.

(h) Suspension bridges and stiffening girders: -suspension cables, anchor cables, tension in the cables, temperature stresses, shape of the cable under its own weight and a given system of loading, three hinged and two hinged stiffening girders influence line for B.M. and S.F. temperature stresses in stiffening girders.

(i) Unsymmetrical bending. Stresses due to unsymmetrical bending. Position of neutral axis.

(j) Thick cylinders, compound thick cylinders, shrink fit, thick spherical shells. Failure theories.

(k) Elementary principles of column analogy.

## 2a—STRUCTURAL ENGINEERING DESIGN I (RCC)

## (a) Plain Concrete :

- Cement— Properties of various types of cements; ISS tests, storage.
- Water— Standard expected of water used in concrete, effects of impurities.
- Aggregates— Properties of fine and coarse aggregates, natural and artificial aggregates, ISS tests, effects of moisture, grading of aggregates, fineness modulus, impurities and their effects.
- Concrete— Properties of concrete and their tests; tests for workability, compressive and tensile strengths, various tests for determination of strengths, factors influencing strength of concrete, different types of concrete (light weight, pre-packed, prestressed, vacuum, high early strength) design of mix-trial and error, void ratio, law, curing of concrete, basic principles of quality control of concrete, physical properties of concrete, stress-strain curve, shrinkage and creep.

## (b) Reinforced Concrete :

Necessity of reinforcement, characteristics of reinforcement, different reinforcing materials;

Elastic theory of reinforced concrete design, assumptions made.

Design of beams—singly and doubly reinforced, rectangular and T-beams, design for shear reinforcement, design of subsidiary and main beams, design of cantilevers, T-beam floors, balcony and staircases (excluding spiral staircase) lintels.

Design of slabs—Simply supported slabs, two-way reinforced slabs with corner free to lift and held down (Grashoff-Rarkine theory, Marcus's method, Indian Standard Code Recommendations) continuous slabs.

Design of columns—axially loaded short and long columns with lateral and helical reinforcement, eccentrically

loaded columns, effect of small and large eccentricities, direct and bending stresses, in R.C. Section.

Design of independent and combined footings (except raft foundation) Design of pile and pile caps,

Design procedure of form work for slabs, beams, columns and walls, striking of formwork.

Design of reinforced brick slabs.

### 3a—HYDRAULICS AND HYDRAULIC MACHINES

1. *Dimensional Analysis*—Units and dimensions, Dimensional homogeneity, Methods of dimensional analysis—Rayleigh method and Buckingham method, Application of dimensional analysis to pipe friction problem, resistance of partially and fully submerged bodies and other simple problems.

2. *Similitude and Model Testing*—Geometric Kinematic and Dynamic similarities, Reynolds, Froude, Mach (or Cauchy), Euler and Weber numbers, Model Laws, Distorted and undistorted models, Types of distortion, Necessity of distortion, Proper choice of scale ratios, scale effect, Proving of Model, Model investigation for partially and fully submerged bodies, Ship model experiments, Models of river channels.

3. *Flow through pipes*—Turbulent flow, Shear stresses in turbulent flow, Prandtl's Mixing length concept, Establishment of flow in pipes, Hydrodynamically smooth and rough boundaries, Velocity distribution in turbulent flow in pipes, Blasius and Nikuradse's experiments, Prandtl and Von-Karman formulae Resistance of smooth and artificially roughened pipes, friction factor variation, Stanton and Prandtl curves, Resistance for commercial pipes, Use of Moody's curves.

4. *Flow through channels*—Types of flow—Uniform steady flow, Non-uniform and variable flow Chezy's, Kutter's, Manning's and Bazin's formulae. Economic sections for rectangular, circular and trapezoidal channels, Hydraulic gradient for channels, Parallel and curvilinear flow, computation of uniform flow in prismatic channels, Conveyance, specific energy of flow critical depth of flow is prismatic channels, alternate depth. Rapid, critical and tranquil flow, specific force, Conjugate or sequent depths, Critical flow and its computation, in prismatic channels, Channel transitions with reduced width and raised bottom in a rectangular channel

Equation of gradually varied flow in prismatic channels. Limitations of its applicability and assumptions made in its derivation, classification of channel bottom slopes—Mild, Steep and Critical Slopes, Classification of surface curves in prismatic channels, Computation of M1 and M2 Profiles only by elementary methods of computation.

Hydraulic jump or standing wave,—Types of hydraulic jump, Analysis of hydraulic jump in rectangular channels, Different methods of determining the elements of hydraulic jump. Location of hydraulic jump in different cases, Jump as an annihilator of energy.

5. *Impact of free jets*—Impact of a jet on a flat and a curved vane both held stationary as well as moving, Flow over radial vanes, Jet propulsion of small ships.

6. *Water Turbines*—Classification of turbines, Pelton wheel, Francis turbine, Propeller turbine—Kaplan turbine, Main components, work done and efficiencies, Working proportions, and Hydraulic design of above noted turbines, Draft tubes, Functions, Types and Efficiency of draft tube. Governing of turbines, Oil pressure Governor, Pressure regulation Surge tanks.

*Performance of turbines*—Unit and specific quantities, Specific speed, Characteristic curves, Model testing of turbines, Cavitation, Selection of turbines.

7. *Centrifugal pumps*—Types of centrifugal pump, Working principle; and work done by the impeller, Heads and efficiencies Description of single stage and multistage pumps, Specific speed, model tests, Pumps in series and pumps in parallel, Characteristics curves Priming devices.

#### 4. a. ROAD RAILWAYS & AIRPORT ENGINEERING

##### *Roads:*

1. Brief history of road development in India—20 year and five year plans.
2. Geometric design: Width of formation, right of way width of pavement, Gamber, gradient, Superelevation. Radius of curves, speed, sight, distance, road cross section.
3. Traffic engineering: traffic census, types of road crossings Road signs, segregation of traffic roundabouts.

4. Survey: general principles of selection of alignment. Reconnaissance survey, preliminary survey, final or detailed survey.
5. Road material: Tests for road metals. Bitumen, Asphalt and tar cut backs and emulsion. Penetration and ductility tests for asphalt.
6. Pavement design—C.B.R. method. Design of W.B. pavement. Modified Westerguard equations for design of concrete pavement.
7. Construction of—(i) Earth roads (ii) W.B.M. roads (iii) Bituminous surface painting Prsmix. Tar bituminous and asphalt roads of cold emulsion type (iv) concrete roads Comparative study and selections of pavements.
8. Drainage—Necessity—Drainage system.
9. Hill roads, special problems; such as bends, prevention of slips. Breast and retaining walls, drainage.
10. Maintenance: Maintenance of earth, W.B.M. bituminous & concrete roads; Administration. Road arboriculture.

#### *Railways:*

History: Gauge problem. Alignment. Reconnoitring. Preliminary and location survey. Traffic Survey. Control Points. Rights of way Ruling, pusher, major and momentum gradients permanent way. Gauge. Ballast and sleepers, Rail Fastenings and other component parts. Different types of rails.

Functions and requirements of Different types of ballast section, Sleepers of hard and soft wood. Cast iron sleepers of pot, plate and box types. cement concrete sleepers.

Tilting of Rail tables, requirements of Rail joints. Different kinds of fish plates, welded joints.

Points and crossings. Details of construction and operation turn-outs. Calculation formulae, left and right hand turn outs.

Cross Overs—Sissors, cross aver, single and double slips.

Leval crossing. overbridge and under bridge.

Mountain railway.

Wear or rails, Creep of rails.

Maintenance of permanent way.

Design of station yards and sidings.

Station sites and approaches.

Inspection and ash pits. Water supply and drainage.

#### *Air Ports:*

Choice of site for an air-port—prevailing winds, Wind-rose, cross wind components main and feeder line halts.

International standard of the International Civil Aviation Organization for lengths of runways, Clearance etc., for different classes of airway traffic.

Gross weight of different aircrafts classification of traffic. Private flying and public transport services.

Lay out of an airport—buildings, light-signals, runway lighting, relative positions of landing apron, car park, office, lounges etc.

Soils studies for runway construction, Gradients—effective gradient surface and subsoil drainage, flexible and rigid pavements, different types of runway surfacing. Turfing. Surface dressed stabilised soil, Bitumen and concrete, suitability with reference to aircraft using the airport.

Aircrafts hangers and repairs sheds—improvised landing strips for aircrafts.

### 5. a. ADVANCED CONSTRUCTION (ELECTIVE)

#### 1. *Preliminary works for construction*

(i) Timbering for excavation Shoring, Underpinning, Scaffolding, Form work for buildings.

(ii) Cofferdams—Common types and uses, Proper selection of coffer dams.

(iii) Dewatering of foundations.

#### 2. *Deep Foundations:*

Use of caissons, common types General design consideration, Well foundations, Sinking of wells, Soil resistance

when sinking, Tilting of wells during sinking, Plugging and filling well caps. Elementary information about pneumatic caissons.

### 3. Embankment Construction Equipment

- (i) Equipment for excavating and hauling—Power Shovels, Draglines, Scapers or side delivery loaders; Trucks, Belt conveyors.
- (ii) Equipment for spreading, blending and compacting Bull dozer, Grader, Harrows (or Plows), Sheep's foot and Rubber-tyred Rollers.

### 4. Tunnelling:

Conditions favouring tunnel alignment instead of an open cut, Transferring of surface alignment, use of shafts and heading Drilling and blasting tools and explosives, Shield tunnelling, Timbering and lining of tunnels, Drainage and ventilation of tunnels.

### 5. Harbours and Docks

Action of wind, waves and currents, Break-waters and their construction, Docks, Quays, Construction of wetdocks, Dry docks, Locks and Lock Gates, Transit Sheds, Ware Houses, Jetties.

6. Elements of critical path method in construction management.

### 5, a. DOCKS AND HARBOUR ENGINEERING (ELECTIVE)

Preliminary knowledge: oceans, Winds, waves, tides, currents, storms.

Hydrography: Sounding, hydrographic charts, river survey gauges.

Layout of ports: Selection of site, principles of design of harbours, moorings, wharves and docks.

Port Entrances: Operation and elementary design of lock-gates, Principles of design, construction and maintenance of dry docks, wet docks, floating docks.

Break—water and jetties.

Foreshore Protection: Revetments and sea walls dredging and channel regulation.



Planning and design of transit shed and ware houses cargo handling—transportation by railroad and inland waterways means of changing levels.

## II Second Term

### 1. b. Soil Mechanics and Foundation Engineering

1. Definitions of water content, specific gravity, unit weights, voids ratio, porosity, degree of saturation, density and density index. Functional relationships among the above Determination of water content, specific gravity; consistency—limits, voids ratio, density index and particle size distribution. Classification of soil. Field identification tests. Elements of soil structure.

2. Soil water. Factors affecting permeability of soil. Determination of permeability in the laboratory and in the field by pumping out test. Permeability of stratified soil masses. Seepage, seepage pressure, quick sand phenomenon, effective pressure and pore pressure. Laplacian equation of flow in two dimensions. Flownet and its construction by graphical and electrical analogy methods. Piping, uplift pressure, drainage and protective filters.

3. Vertical pressure distribution in soil due to point load, line load, strip load and uniformly distributed rectangular or circular load. Influence charts based on Boussinesq equation and Westergaard's equation. Pressure bulb concept in foundation exploration. Contact pressure. One dimensional consolidation of soil Consolidation test and its use in the determination of voids ratio, coefficient of consolidation and coefficient of permeability. Methods of predicting final settlement and its rate. Compaction of soil. Determination of compaction in laboratory and in the field. Field compaction control.

4. Mohr's stress circle. Mohr-Coulomb and Hvorslev's failure theories. Shear strength of soil and its measurement in the laboratory by shear box test, triaxial shear test, unconfined compression test and vane shear test. Rankine's and Coulomb's earth pressure theories. Rabhann's and Culmann's graphical methods. Lateral earth pressure on retaining walls and sheet pile bulkheads. Stability of slopes by Swedish and friction circle methods. Taylor's stability number and stability curves. Stability under sudden draw down.

5. Factors affecting bearing, capacity of soil, Gross and net bearing capacity. Terzaghi's analysis for bearing capacity. Bearing capacity of isolated footings, footings on sand and footings on clay. General and local shear failures. Plate load test. Methods for the determination of load bearing capacity of piles, Group action in piles. Negative skin friction. Well foundations.

6. Stabilisation of soil. Mechanical, Chemical Thermal, electro-chemical, cement and bituminous stabilisation of soil.

7. Site investigation. Depth of exploration. Disturbed and undisturbed samples. Types of samples. Brief description of procedures of boring and sampling. Transport and storage of samples.

### 3 b SURVEYING-II

#### 1. Errors in Surveying :

Classification of errors in surveying, The probability curve, its equation and properties. theory of least squares. Weight, most probable value, probable error, standard error, Normal equation, correlatives. Adjustment of a level net by the methods of least squares.

#### 2. Triangulation :

Merits and demerits of traversing, triangulation, and trilateration. Grades of triangulation, strength of figure, Field procedure of triangulation, Intervisibility and calculation of heights of towers. Equipment for base line measurement, corrections to base line, Electronic instruments (Geodimeter and Tellurometer) for base line measurement. Adjustment of angles of quadrilateral and a triangulation net with a central station, method of equal shift. Satellite station and and base extension.

#### 3. Field Astronomy :

Definitions of the terms used in Astronomy. Coordinate systems, Time-sidereal time, apparent solar time, mean solar time, standard time, equation of time. Conversion of M.S.T. to S.T. and vice-versa, conversion of L.M.T. into G.M.T. and Vice-Versa. Determination of chronometer error, Azimuty, true meridian, time, latitude, longitude. Corrections to observed alatitude. Position lines and Laplace Stations.

#### 4. Photogrammetry :

Historical developments in photogrammetry. Types of air photographs, Flight planning, Fundamentals of radial plotting, radial line assumptions. Plotting of maps from Photographs, Elements of Stereoscopy, Parallax bar and parallax equation, correction of crude heights, Mosaic. Orientation concepts.

#### Map and Plan Reproduction.

### 4. b ARCHITECTURE AND TOWN PLANNING

(A) *Architecture*—Abstract principles of intellectual appeal as applied to aesthetics in architecture.

Brief history of architecture with reference to ancient Egyptian, Greek, Roman christian and Gothic architectures.

Indian architecture with reference to Jain, Buddhist, Dravidian, Muslim and Rajput styles.

Advanced methods of composite construction as in contemporary and modern architecture. Constructional and architectural coordination of works.

(b) *Town Planning* : Brief history of birth and growth of towns. Definition and scope of town-planning. Concept of a town—physical planning and social planning.

Principles of governing selection of site for a new town. Basic elements of city planning. Transportation and communication. Traffic problems and remedies.

Land use pattern and Zoning Industrial, Commercial, Public and Residential areas. Requirement of zones and their interrelationship. Neighbourhood units. New trends in town planning—Housing schemes, future of town, aesthetics of towns, land scape. Garden city and satellite township.

Development of existing cities. Slum clearance and building by-laws. Master plan, its objects and necessity.

Open spaces provisions and standards for a building. Ventilation. Acoustic troubles and remedies in auditoriums.

## 5. b ADVANCED STRUCTURAL ANALYSIS (Elective)

(i) Application of slope deflection and Moment Distribution methods to frames, Gable frames; Sway correction.

(ii) Column Analogy Method for Frames, Stiffness and Carry-over factors for non-prismatic beams.

(iii) Industrial bents; Gable frames and Arch frames.

(iv) Fundamentals of Matrix Algebra—Applications of Matrices to the solution of frames, Stiffness Matrix, Flexibility Matrix, Plane Frames, Space frames—Formulation of the solution only.

(v) Multi-storeyed frames—Portal Methods, Cantilever Method, Factor Method, Kani's Method.

## 5. b APPLIED ELASTICITY & PLASTICITY

Specification of stress and strain at a point. Equations of equilibrium and compatibility. Laws of stress and strain transformation. Principal stresses and strains. Maximum shearing stresses. Mohr's representation of the states of stress and strains at a point. Saint Venant's Principle.

2. Introduction to cartesian tensors. Stress and strain tensors and their invariants. Stress and strain transformations using tensor properties.

3. Generalised Hooke's law. Assumption of isotropy and homogeneity in reducing the number of elastic constants to two. Stress-strain relations. Elastic strain energy.

4. Two dimensional problems. Equations for the solution of two dimensional problems in cartesian and polar coordinates. Airy's stress function and biharmonic equation. Bending of a cantilever of narrow rectangular section. Thick cylinders under uniform pressure. Shrink and force fits. Small circular holes in strained plates and stress concentrations.

5. Spherical and deviator stress and strain tensors and their invariants. Relations between stress and strain tensors. Octahedral and effective stresses and strains and their importance.

6. Failure theories—The Lamé-Navier, Maximum normal-strain theory, Beltrami's energy theory, Maximum shear-

ing-stress theory and Mohr's theory. Yield conditions or Plasticity conditions. The maximum shearing stress condition and the energy of distribution condition. Plastic stress-strain relations.

7. Thin walled tubes under combined axial tension and torsion or axial tension and internal pressure theoretical considerations and experimental verifications.

## FINAL B.E. EXAMINATION

### First Term

#### 1. *a Structure Engineering Design III (R.C.C.)*

Stresses due to shrinkage and creep.

Design of retaining walls; cantilever and counterfort types. Design of beams curved in plan with uniformly distributed loads only.

Analysis of stresses in a R.C. dome. Design of dome for uniformly distributed load with and without central load. Flat slab.

Design of underground, overhead rectangular and circular tanks. Intze tank (membrane analysis only). Design of staging. principles of design of Raft foundations.

Introduction to I.R.C. loading. Design of slab culverts, Box culverts, T-beam bridges, Balanced cantilever bridges, Arched bridge. Design of bearings.

Pre-stressed concrete advantages and disadvantages. Method of pre-stressing. Losses of prestress. Design and analysis of a pre-stressed beam excluding and block.

Determination of cable profiles.

Elements of ultimate load theories. Design of beam by Whitney's theory.

## 2a PUBLIC HEALTH ENGINEERING

### (a) Water supply engineering.

Water supply, sources of water supply. Collection of surface and ground water. Lake and river intakes.

Quantity of water per capita. Variation in seasonal and hourly consumption. Forecast of population.

Chemical and bacteriological analysis of water. Standards of water quality for drinking.

System of water works. Plain sedimentation. Quiescent and continuous flow types of tanks. Coagulation. Use of alum, ferric chloride and other chemicals as coagulants. Determination of coagulant dose by jar test. Methods of feeding coagulants. Mixing of coagulants. Flocculation. Filtration. Design and functional aspects of slow sand and rapid sand filters. Disinfection. Use of chlorine, chloramines, ozone and ultra violet rays for disinfection. Lime soda process for water softening.

Different types of pipes, joints and valves used in water supply practice. Distribution of water. Design of distribution systems. Service reservoirs. Alignment, laying and jointing of pipes. Service pipes, fittings and connections. Detection and prevention of waste of water. Metering. Rural water supply.

#### (b) Sanitary engineering:

Separate, combined, and partially combined systems of sewerage. Forms, cross section, and inclination of sewers. Construction and maintenance of sewers. Ventilation of sewers. Testing of sewers. House drainage : Conservancy and water borne systems. Stoneware pipes, tappers, bends and junctions, Intercepting traps, grease traps, gulleys. Water closets, cisterns, urinals, baths and lavatory basins. Soil waste and anti syphonage pipes.

Strength and compositions of sewage. Chemical and biochemical oxygen demand.

Principles of sewage treatment. Aerobic and anaerobic bacterial action. Sewage screening. Grit separation, Sewage pumping. Disposal of sewage by dilution. Self purification of streams. Disposal of sewage on land. Sedimentation. Septic-tanks and Imhoff tanks. Contact beds and trickling filters. Activated sludge process. Sludge volume index. Recirculation of sludge. Design, working and maintenance of anaerobic digesters. Different methods of sludge disposal. Oxidation ponds. Oxidation ditches Rural Sanitation. Collection and disposal of refuse. Composting. A brief idea about industrial waste problem.

### 3. a ENGINEERING ECONOMICS

#### I. *Managerial Economics :*

1. Demand, supply and market price under Pure Competition.
2. Pricing and output under oligopoly.
3. Pricing and output under Monoplistic Competition.
4. Marginal Utility.
5. Present-worth and discounting principles.
6. Principles of Production, and costs of Production.

#### II. *Managerial Accounts and Budgetary Control :*

1. Elements of Book-keeping including accounting of Depreciation and Reserves.
2. Banks and other financial agencies : Cheques, Negotiable instruments; Bills of Exchange; Financial resources.
3. Analysis and interpretation of Balance Sheets and Financial Statements : Analytical Ratios.
4. Elements of costing.
5. Fund-flow charts.

#### III. *Business Organization :*

1. Types of companies; (1) Private sector : (2) Public Sector.
2. Shares; Debentures; Rights; Risks.
3. Board features of Company Laws, Labour laws, Workmen's Compension Act, Trade Unions, Strikes and lockouts; Agencies for maintaining industrial peace.
4. Scientific Management : Qualities of a good manager.
5. Elements of Inventory Control.

#### IV. *Engineering Specifications and Contracts :*

1. Definitions, general and detailed specifications and their necessity.

2. Tenders : preparation of specifications; information to be given on preliminary enquiry and on placing the order.
3. Essentials of a contract : Documents in an engineering contract; contracts for supply, erection, guarantee and acceptance.
4. Standard forms of contract.
5. Letting contract.
6. Information required for inviting tenders.

## 5. a WATER RESOURCES ENGINEERING (Elective)

1. *Probability concepts in Hydrology* : Frequency series. Recurrence interval. Statistical methods for estimating the frequency of rare events. Probable maximum floods, Droughts. Duration curves. Synthetic streamflow.

2. *Planning for water Resources Development* : Data needed for planning. Project formulation. Project analysis. Some Common pitfalls in project planning. Augmentation of water supplies. Functional requirements in multiple-purpose or objects. Compatibility of multiple-purpose uses.

3. *Land Drainage* : Drainage ditches. Under drains Flow of ground water to drains. Layout of a tile-drain system. Design of a land-drainage system. Drainage by vertical wells.

4. *Hydrology of Arid and Semiarid Regions* : Characteristics of Arid and Semiarid regions. Precipitation in arid and semiarid regions : General characteristics, long term fluctuations, significance of pre-cipitation. Evaporation and Transpiration in Arid and semi-arid regions. Ground-water in Arid and Semi-arid regions. Adverse effects of Arid climatic conditions on physiological responses of plants. Salinity problem in irrigation Agriculture.

5. *Flood control* : Flood control Reservoir : purpose. location, size and operation problems. Flood ways, channel improvement. Evacuation and Flood-Plain zoning. Land Management of Flood control. Economics of Flood control.

6. *Water Resources Systems* : Elementary concepts of systems analysis in Water Resources Engineering from the standpoint of both the quantity and quality of water.



## 4. a FLUID MECHANICS (Elective)

*Fluid Dynamics* : Derivation of continuity equation in cartesian and polar coordinates. Vector derivation of the continuity equation. Rotation and Vorticity. Conservation of momentum and conservation of energy. Equations of Motion. Navier-Stokes Equations.

*Potential Flow* : Velocity potential and stream function for two-dimensional flow. Source, sink and doublet. Flow past a circular cylinder. Flow around a circular cylinder with circulation. Potential flow forms conformal transformations in the complex plane.

*Viscous Flow* : Dissipation of energy through viscous shear. Instability of viscous flow. Reynolds upper and lower critical limits. Characteristics of Fluid Turbulence. Significance of the Eddy viscosity.

*Boundary Layer Theory* : Description of the Boundary Layer. Prandtl Boundary Layer Equations. Flat plate in a uniform Free Stream with no pressure gradients, laminar boundary layer and laminar sublayer. Boundary layer separation. Distribution of Fluid pressure on immersed bodies. Drag of immersed bodies.

*Lift and Propulsion* : Circulation and the Magnus effect. Side thrust due to circulation in irrotational flow. Lift and drag of a rotating cylinder. Lift and Drag of the Airfoil. Characteristics of propellers.

## 1. b STRUCTURAL ENGINEERING DESIGN IV (STEEL & GENERAL)

Through & Deck type plate girder bridges. Standard loading for railways bridges. Lateral bracings, cross frames, End bearing—different types. Types of truss bridges, limiting spans. Influencelines and principles of design of through and deck type trusses 'K', Pratt, Warren, Baltimore and Petit type trusses.

Design of Rocker and roller bearings.

Design of railway bridges—Design of Stringers.

Cross girders, Main girder. Design of lateral & Sway bracings, end portals. Tractive sway and Wind forces. Use of high tensile bolts in joints of bridge trusses (description only).

Description of continuous girders, cantilever and arch bridges. Influence lines for cantilever, three-legged and arch bridges.

Design of rectangular and circular overhead steel tanks. Specifications for design. Design of Staging.

Design of steel and masonry chimney stacks and their foundations.

Design and stability of masonry gravity dams. Testing of masonry arches.

Analysis of statically determinate simple space frames.

Fundamentals of plastic theory for steel structures. Statical and mechanism methods of analysis for fixed and continuous beams.

Timber—Timber as structural material. Strength of timber in tension, compression, shear, along and across the grain. Design of timber trusses and joints.

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## 2b—IRRIGATION AND WATER POWER ENGINEERING

Introduction—Definition, scope, necessity, system of irrigation, advantages and disadvantages, aim, extent of irrigation; Irrigation methods, assessment of irrigation water; modern concept of applying irrigation water to land.

Soils, Water and Crops—

Soil—types and their importance to an irrigation engineer and classification.

Water—sources of irrigation water, Soil-Water relationship.

Crops—Main crops of India, crop seasons, water-requirements of crops, Duty-Delta and relation between them; Improving the duty of a defective canal system; Maintenance of soil fertility, crop rotation; Irrigation water quality.

*Hydrology :*

**Descriptive Hydrology-Definition.** The Hydrologic cycle, the river basin; Precipitation-types of precipitation, precipitation measurement, Computation of Average precipitation. Snow variations in precipitation; Stream flow-measurement of stream flow, measurement of river stage, stream flow units, variations in Stream flow Evaporation and Transpiration-Factors effecting evaporation, Determination of Evaporation, Transpiration, Evapotranspiration, Variations in evaporation and transpiration.

**Quantitative Hydrology-Basin recharge and runoff Hydrograph Analysis,** Estimating Volume of Runoff average annual runoff and maximum runoff by different methods, Flood formulae their limitation unit Hydrographs their application to determine peak flows, Rational methods of determining flood discharge; Storage routing—The routing process, Routing through uncontrolled reservoirs, Routing in controlled reservoirs, routing in natural channels, local inflow. Electrical analogy to stream flow.

**Ground water and well Irrigation—Occurrence of ground water zones of underground water, sources of ground water, Aquifers, The water table, Artesian aquifers, Discharge of Ground water, Ground water Hydraulics Movement of Ground water, Permeability formulae, Hydraulics of Wells, Boundry Effects; types of wells. Construction of wells, yield of wells: duty and delta types of strainers—design considerations; well finishing well sanitation, Maintenance of wells. Location of ground water suppliers; Yield of Ground water-safe yield. Artificial recharge, Comparison with canal irrigation.**

*Reservoirs and Dams—*

**Reservoirs—Types of reservoirs, Physical characteristics of reservoirs. Reservoir yield, selection of capacity for reservoirs, yield from a given reservoir, capacity, Mass curves, sediment transport by streams. Reservoir sedimentation control, wind tides, and waves in Reservoirs, Reservoir clearance reservoir leakage, Reservoir site selection.**

**Dams—types of dams, Forces on dams; gravity dams structural stability of gravity dams. Analysis of gravity dams, Construction of gravity dams. Arch dams General considerations. Design of Arch dams, Construction of Arch dams; Buttress dams—General considerations, Forces on**

Buttress Flatslab of buttress dams, Construction of buttress dams; Earth dams types of Earth dams. Methods of construction. Design of Earth dams—Height of dams, top width seepage. Pore pressure, slope stability, Foundation, Analysis, Slope protection; Rock fill dams; Miscellaneous types of dams—Timber crib, Cofferdams.

### Spillways, Gates and Outlet Works—

Spillways General, Overflow, Chute. Side. Channel, Shaft Siphon and Auxiliary tubes, Dynamic forces on spillways.

Crest Gates—Flashboards stop logs and needles, vertical lift gates Radial gates, Rolling gates, Boar-tray gates, Drum Gates, Ice control at spillways.

Outlet works—Sluiceways, Intakes, Trashracks, Entrance gates, Valves Gate installations. Hydraulics of outlet works. Protection against scour below dams.

River Engineering—Classification and stages of rivers meandering, cut offs, river training, embankments, guide banks. Spurs, artificial cut offs, bed pitching and bank revetment, dredging.

Canal head works—Site selection, Component parts; Weirs and Barrages—Bligh and Khosla Theories, Causes of failures and remedial measures.

Irrigation Canals—Classification, canal alignment, perennial and Inundation canals; site selection and design considerations for Inundation canals: Design for Irrigation canals—Kennedy and Lacey theories, defects, use of design diagrams, L-Section, cross section of Irrigation channels, spoil banks, borrow pits, land width, Construction and maintenance of channels losses in canals—evaporation and seepage losses; lining of irrigation canals, canal masonry works—cross drainage works, regulators, falls, flumes, Outlets, tail clusters, siltjectors and extractors, escapes, bed bars.

Water logging, Salts efflorescence, Drainage Engineering.

Causes and Remedial measures of water logging and salt efflorescence, Land Drainage, drainage ditches, underdrains, flow of ground water to drains, layout of a tile drain system. Design of a land drainage by vertical wells.

### Water Power Engineering—

Hydro—electric power development in India. Comparison of steam and Hydroelectric power costs, power systems and load Hydroelectric power terms, types of hydroelectric plants. General arrangement of a hydroelectric project, Forebay, Penstocks, Power house, Tail race, Electrical equipment, operation of hydroelectric plants, selection of turbines. planning the hydroelectric power development.

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### 3b EXPERIMENTAL STRESS ANALYSIS

1. Theory of Elasticity—Equations of equilibrium, compatibility conditions, stress-strain relations, Plane stress and plane strain problems, Airy's stress function.

2. Methods of Strain measurement :

(a) Electrical Gauges—Variable resistance strain gauges, Types of electrical strain gauges—unbonded and bonded, Bonding of gauges, Electrical resistance measurement by potentiometer type circuits and bridge type circuits, Temperature compensation, Gauge factor, Cross sensitivity, Strain gauge rosettes.

(b) Mechanical gauges—Mechanical lever type gauges—Berty type strain gauge and Huggenberger tensometer, Optical lever type gauges—Martens extensometer and Tuckerman extensometer.

(c) Miscellaneous—Moire fringe technique, Grids.

3. Photoelasticity—Optical laws, Plane and circular Polariscope, Interpretation of isochromatic and isoclinic fringe patterns, Determination of principal stresses, Separation and compensation techniques.

4. Optical Methods used in the study of fluid flow—Schlieren Apparatus.

5. Electrical Analogies applied to civil engineering problems.

### 4b—ADVANCED DESIGN OF STRUCTURES (ELECTIVE)

A. *Concrete Structures.*

(i) R.C.C. Chimney— temperature stresses.

(ii) Design of silos and bunkers.

(iii) Design of bridges.

Arch bridges—filled spandrel arch bridges, open spandrel arch bridges, bow string girder bridges.

(iv) Basic principles of analysis and design of multi-storied buildings.

#### B. *Steel Structures* :

(i) Transmission Towers—Tension coefficient method.

(ii) Industrial Building frames.

(iii) Plastic design of Steel frames.

#### 4b—PRE-STRESSED CONCRETE (ELECTIVE)

Various Methods of Pre-stressing—end anchorages. Losses of Prestressing and their estimation. Analysis and design of section for flexure, shear and bond, Camber, deflection, Cable layouts Stretching in stages. Design of end blocks.

Design of pre-stressed concrete slabs—one way, two way and simple and continuous flat slabs.

Precast beams, Cracking and Ultimate loads.

Statically Indeterminate Structures—Continuous beams, Load balancing Method—Concordant Cables.

Tension members: Circular pre-stressing—Pre-stressed tanks.

Compression members—piles.

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B.E. III (M)

I First Term

#### 1. a *Solid Mechanics* :

Stress and Strain: Hook's law, tension compression and shear, complementary shear stresses. Poisson's ratio, Elastic constants and their relations for an isotropic material. Tempe-

ature stresses and composite bars. Elastic and plastic behaviour of common materials in tensile and compressive tests characteristic stress strain curves. Ultimate strength, working stress and factor of safety. Resilience and suddenly applied loads.

Bending moment and shear for a diagrams and deflection of beams under static loading. Rolling loads, section modules.

Shear stress distribution in rectangular, circular, TEE and 'I' sections.

Relation between load, shearing force, bending moment, slope and deflection. Plate and leaf springs.

Torsion: Shear stress in solid and hollow circular shafts, angle of twist, power transmitted by a shaft under pure torsion.

Stress and deflection of closely coiled circular section springs.

Columns : Long and short columns, ideal strut, Euler's formulae for crippling loads, end conditions and equivalent length of struts.

Principal planes, stress and strains, ellipse of stress ellipse of strain and Momental ellipse. Neutral axis. Mohr's circle diagrams. Theories of elastic failure.

Thin and thick cylinders : stress and strains in thin and thick cylinders. Compound thick cylinders. Pressure vessels.

Resilience in beams and springs: Sudden loads on bars and springs. Strain energy method.

Machine foundations.

## 2. (a) *Materials Science* :

The structure of matter. Engineering requirements of materials. Basic concepts of phase transformations. Heat treatment. Principles. Mechanisms of deformation, dislocation theory, work hardening. Effect of macro and micro-structures on properties.

Mechanical properties, plasticity and flow. Adhesion and friction, mechanism of wear.

Bearing material, surface hardening, hard facing materials.

Refractions : refractions, common refractory materials, high grade refractories.

Organic high polymers. Formation and structure of high polymers. Thermo-plastic and thermosetting resins. Rubbers

Cement, ceramic coated materials. composite materials.

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### B.E. III (M)

#### 3. a *Electrical Technology* :

1. Principle of operation and performance characteristics, of d.c. motors. Starting of d.c. motors. Speed control of d.c. motors.

2 Principle of operation and performance characteristics of three phase induction motors. Starting of Induction motors.

3. Applications of a.c. and d.c. motors for Cranes. Lifts, Rolling mills, textile mills and domestic purposes.

4. Electrical Illumination Definition. Types of lamps, lighting arrangements for offices, Workshops.

5. Power Rectifications :—Thyatron, Ignitron, Basic Polyphase rectifier circuits.

6. Resistance Welding:—Ignitron Contractor for resistance welding, synchronous control circuit, sequence of functions.

7. Speed control of D.C. Motors: Thyatron supply for D.C. Motors, speed regulation by armature voltage control.

8. Basic Photocell relays and their application,

9. Principles of operation of 3-phase and 1-phase transformers.



#### 4. a. *Technical Thermodynamics-I*

Fundamental concepts: P.E. & K.E. Internal Energy system-open and closed-homogeneous and Heterogeneous. property, state and process. Working substance definition of ideal gas, real gas & vapour. Heat & work-works of non flow system flow work, power.

*Zeroth Law* : Zeroth Law. Temperature and its measurement, temperature scales.

*P.V. t. relationships* : P.V.t. relationship for ideal gas and real gases. Vander wall's equation PVT surface, compressibility factor. Principle of corresponding state. Use of generalized compressibility chart.

*First Law* : First law and the closed system. Energy balance, I.E. Enthalpy, Specific heats, cyclic processes, first law and the open system. General energy equation for one dimensional steady flow.

*Second Law* : Kelvin Planck & Clausius statement Reversibility, reversible processes, Carnot cycle, corollaries of 2nd Law. Thermodynamic temperature-scale, entropy, change in enthalpy, internal energy and entropy in ideal gas processes, Clausius inequality.

*Third Law of thermodynamics* : Principle of increase of entropy, availability and irreversibility. T.Q.I.Q. charts for air.

*Kinetic theory of gases* : Volumetric heat, decrease of freedom of gas molecules. pressure of gas by kinetic theory, effect of temperature on molecular heat, variation of internal energy with molecular heat, application to I. C. Engines, Calculation of gas constant in engine cylinders, value of  $\gamma$  for compression and power strokes, temperature at completion of combustion, heat of reaction, variation specific heat, TEQ chart for air.

*Thermodynamic processes steam* : Change in enthalpy entropy and condition of steam during thermodynamic process. Work done.

*Gas Power cycles* : Ideal cycle, Carnot cycle, Otto Diesel Dual combustion Joule, Stirling Ericsson, Atkinson and Bryton cycles. Air standard efficiency. Effect of variable specific heat thermal efficiency Applications..

*Vapour Power cycles* : Steam carnot cycle, Eakine cycle, Modified Rankine cycle, Reheat cycle, multistaging reheat factor, feed heating, regenerative feed heating, binary vapour cycle thermal efficiency, applications.

*Thirmodynamics of turbc machine processes* : Steady flow energy with heat transfer & shaft work, compression, efficiency Adiabatic compression cooled compression, expansion efficiency, stage efficiency for perfect gas and for steam.

*Reversed Gas cycles* : Application to refrigeration and heating. Reverse carnot cycle, coefficient of performance. Belt coleman cycle, heat pump cycle, Units of refrigeration.

*Reversed vapour cycles* : Properties of commercial refrigerants. P.H. and T-Q chart for refrigerants. Vapour compression cycle, vapour absorption cycle, applications.

## 5. a PRODUCTION MATERIALS AND PROCESSES

### A. *Production Materials* :

Ferrous metals and alloys : Standard grades of cast-iron, mid steel, barbon and alloy steels, tool steels, die streels, stainless steels. heat resistant steels and superalloys. Classification according to IS, BS, En and S.A.E. Standards.

Non ferrous metals and alloys : Their standard grade, classification.

*Vitrous materials* : Ceramics, Portectein, glass and carbides for engineering application.

Selection of material for major components of machine tools, prime movers, material handing equipment, pumps, compressors. Vehicles, refrigeration equipment and pressure vessels.

### B. *Production processes* :

Survey of manufacturing processes.

Hot and cold rolling, tube making, extrusion, forging and hot pressing.

Foundry processes—patterns and pattern making, moulds and mould making-cores and core making, plaster, investment, lost wax, investment, die and centrifugal casting.

Elements of cold working Swaging, spinning, cold heading, cold pressure welding, riveting and thread rolling processes.

Processes and press working processes: Type of presses, drives. Basic die set, stops, strippers and ejection devices. Simple, compound and progressive dies. Concept of press-working processes like forming, drawing, stamping, cutting blanking, bending, punching, shearing, trimming; coining and nibbling.

Metal cutting Processes: Lathe working, shaping, planing, milling broaching, drilling, reaming, boring, thread cutting thread rolling and tapping processes. Mechanics of metal cutting and chip formation. Single point and multi-point tools.

Tool shapes and angles. Cutting speeds and feeds for different tool and job materials. Relationship between cutting force, tool, life, surface finish and power required. Use of coolants. Causes of tool wear, failure and their remedies. Reconditioning of tools.

Processes of Gear Manufacture: Gear cutting, shaping, hobbing, shaving and grinding.

Basic constructional features and principle of operation of engine lathes, drill presses, shapers, slotting machines, planners, milling machines and boring mills. Indexing.

Joining processes: Adhesives and bonding. Soldering and brazing—applications and limitations.

Types of welding processes: Spot resistance, seam protected arc, flash and upset type of electric welding. Thermit welding and gas welding process.

Electric welding equipment: Generators and transformers their control, accessories, types and selection of electrodes. Application of inert gas shielded, atomic hydrogen and submerged arc welding equipment. Resistance welding equipment and its application.

Gas welding equipment: Oxy acetylene gas welding and torch cutting.

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## (II) Second Term

### 1. (b) *Fluid Mechanics* :

**Introduction** : Different properties of liquids, Ideals and real fluids, compressible and incompressible fluid and gases.

**Fluid statics** : Eulers equation of equilibrium pressure in a fluid under the action of gravity-pascal's law; Manometry\*\* stability of floating bodies.

Free surface of a body of liquid subject to a constant acceleration constant velocity rotation of a liquid about a fixed axis.

Atmospheric equilibrium—isothermal, isentropic and polytropic atmosphere—standard atmosphere.

**Fluid Dynamics** : Basic concepts, Laminar and turbulent flow, steady and unsteady flow-stream lines and path lines. One and two dimensional flow, elementary concepts of free and forced vortex flow. Stream tubes control volume, definition.

The integral form of equations of conservation of mass momentum and energy as applied to control, Volumes-application to the steady flow of ideal fluids in one dimension.

Berunaullis equation—static pressure, velocity head and total head. Pitot static tubes; measurement of flow rate-orifice nozzles-venturimeters.

Linear momentum and angular momentum—Law of conservation of angular momentum; pressure on the walls of pipe bends' pressure exerted by a free jet on fixed and moving flat plates and curved vanes; losses due to sudden changes in cross section. Application of the principle of conservation of angular momentum to flow through turbo-machines momentum theory of propellers.

**Effect of viscosity** : Newton's Law-viscosity, Reynold's number poiseuille flow. couette flow. Turbulent flow through pipes-critical Reynolds number. Bernaullis equation

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\*\*forces on submerged plane and curved surfaces, buoyancy;

with losses; pipe friction; minor losses; Pipe flow problems; total energy line. Hydraulic gradient.

*Compressible flow* : Basic relationship for one dimensional compressible flow, continuity equation, equation of state, momentum equation, and steady flow energy equation. Polytropic and isentropic relationship, sonic velocity, mach number.

Elementary concept of boundary layer and separation. Flow over immersed bodies; spheres, cylinders and thin airfoil section—pressure distribution, drag and lift coefficient.

## 2 (b)—ENGINEERING METALLURGY.

Metallurgy in Engineering. Iron carbon alloy. Heat treatment of steels. Case hardening and surface treatments. Functions of alloying element in steel.

Metallurgy of melting, casting, rolling, forging and joining processes.

Destructive and non-destructive testing of metals and alloys.

Principles of corrosion. Methods of protection.

Pyrometry : Thermocouples, radiation and optical pyrometers.

Properties and applications of tool steels, corrosion and heat resistant alloys, stainless steels, high strength heat resistant alloys, cast irons, copper alloys, light metals and alloys.

## 3 (b)—MATHEMATICS VII (M)

### *Differential Equations :*

Elements of partial differential equations of first and second order.

### *Vector Calculus :*

Gradient of a scalar point function. Divergence and curl of a vector point function. Line, Volume and Surface integrals, Gauss, 'Stokes' and Green's theorems.

*Infinite Series :*

Simple tests for convergence, Fourier series and Harmonic Analysis.

*Numerical Analysis :*

Finite differences, forward and backward differences, Newton's forward and backward difference interpolation formulae, Numerical differentiation and numerical integration (Trapezoidal rule and Simpson rule).

*Nomography :*

Theory and simple applications by nomograms.

*Matrices :*

Definition, Addition, subtraction and multiplication of matrices. Transpose, conjugate, adjoint and inverse of a matrix. Applications to the solution of algebraic linear simultaneous equations.

*Statistics and Probability :*

Frequency distributions—mean, standard deviation, Theoretical definition and empirical measures of probability, expected value. Theoretical, probability distribution; Binomial, Normal and Poisson's distributions.

#### 4 (b)—MACHINE DRAWING & DESIGN

##### A. Machine Drawing.

*Assembly and detailed drawings :*

Machine Tools : Tail stock, tool rest, machine vice.

Bearings : Ring-oiled, swivel, thrust, self-aligning bearings.

I.C. Engines : Main components like piston, crank shaft, valve gear.

Boilers and pressure vessels. Safety valve, steam traps, steam injector, expansion joints of steam pipe.

Gear Boxes : Automobile, reduction, stepless types.

##### B. Machine Design.

Fundamental principles of machine design. Metals & alloys used and their main properties. Allowable stresses. Factor of safety with elementary treatment.

Design of machine elements, subjected to direct stress e.g. pin joints, collar joints, revited joints, screw fastenings and welded joints.

Revited and welded joints with eccentric loading.

Design of thin and thick cylinders, covers of different shapes, Boiler shell design with IBR.

Design of Rigid and flexible couplings.

Rigid : Flange and collar type.

Flexible bush and Hooke's joint.

Design and selection of keys and retainers.

## 5. (b)—TECHNICAL DYNAMICS—I

Mechanics : Force displacement velocity and acceleration diagram plotted to time and space base. Relative displacement angular velocity and acceleration. Simple velocity and acceleration diagrams with the help of relative velocity and relative acceleration method. Angular displacement, angular velocity and acceleration.

Couples, torque, kinetic energy of translation and rotation moment of inertia and radius of gyration on machine motion.

*Kinematics* : Analysis of machine elements, pair, mechanism and a machine. Quadratic cycle coain and its inversion, slider crank chain and its inversion, double slider crank chain and its inversion. Velocity and acceleration diagrams. Instantaneous centre, centrode and axode. Coriolis components. Kletn's construction.

Simple Machines : Differential wheel and axle, pulley blocks, differential pulley blocks, single and double purchase winch crab, worm and worm wheel gears. Mechanical advantage, velocity ratio and efficiency of simple machines. Law of machines.

*Friction* : Solid, rolling, greasy and viscous friction, Laws of various types of friction Inclined plane, simple and compound screw jacks.

Effect of lubrication on friction. Types of lubrication. Basic concepts of various theories of lubrication, including

hydrodynamic lubrication. Absorbed and viscous films. Tower's Experiment, Osborne Reynolds's interpretation.

Friction of pivots and collars. Single disc, multiple disc, centrifugal, Semi centrifugal, and magnetic types of clutches. Friction circle and friction axis of links. Mitchell thrust bearing Ball and roller bearings Energy absorbed in bearings.

*Brakes and Dynamometers* : Different types of brakes, band brake block brake, band and block brake, internal shoe brake. Braking action. Brake systems; mechanical hydraulic, pneumatic vacuum and air brakes as applied to automobile Dynamometers. Absorption and transmission type.

*Power Transmission* : Belts, ropes and chains—length of belts, ratio of tensions, centrifugal tensions and its effect on power transmission, Slip and creep. Rope and 'V' belt drives. Chains—types of chains and chain drives. Hydraulic Torque converters.

#### IV B.E. (Mech.)

##### (I) First Term

##### 1. a. *Technical Thermodynamics*—II :

Combustion : Non steady and steady. Complete combustion stoichiometric and excess air requirement. Mass balance and energy balance equations. Pre flame reactions, limits of combustibility, adiabatic and equilibrium flame temperatures. Kinetics of combustion, quenching distance and flame stabilization, flame propagation velocity and burning velocity. Combustion triangle. Process of burning of pulverized and atomized fuels burning in fuel beds.

Construction and use of combustion charts for unburnt and burnt mixtures.

*Heat transfer* : Modes of heat transfer—One dimensional steady state conduction—Linear heat flow through Plane wall—radial heat flow through cylinders and spheres composite walls, cylinders and spheres—effect of variable conductivity and heat transfer from fins.

Nature of heat convection, free and forced convection boundary layer concepts—Application of dimensional analysis to free and forced convection—Reynolds and Prandtl, Grashof Nusselt and Stanton numbers empirical equations of convective heat transfer.



Combined conduction and convection-Heat transfer between 2 fluids. Through plane and cylindrical walls-types. of heat exchangers-LMTS Heat exchanger effectiveness.

Thermal radiation-monochromatic emissive power absorptivity reflectivity and transmissivity, Concept of black body and greybody. Kirchoff's Law Wien's displacement Law and Stefan Boltzman Law. Heat transfer by radiation between black and gray surfaces.

Dalton's Law : Mixture of ideal gases. Irreversible mixing of ideal gases. Mixtures of gases and vapours.

Basic thermodynamic data, basic variables, psychrometric tables and charts, psychrometric processes. mixing of air steams under different conditions, sensible heating and cooling, humidification, Dehumidification, cooling and humidification, heating and dehumidification, cooling and dehumidification, heating and dehumidification Conditions for human comforts under different situations, effective temperature. Comfort chart. Concept of application to air conditioning.

Mixture of water and steam and of water and air. Application to steam condensers. Leakage of air in condensers. Capacity of air extraction and combined extraction pumps. Air cooling sections. Vacuum efficiency, condenser efficiency and coefficient of performance.

Evaporative cooling of air and water in cooling towers. Spray ponds. Cooling water requirement.

## 2. (a) INTERNAL COMBUSTION ENGINEERING.

*Combustion in S.I. Engines* : The Process of combustion flame development and propagation-effect of operating variables on flame propagation-detonation effects of engine variables on otto knock-rating of fuels-Octane number. Abnormal Combustion, its cause and effects and reduction.

*Combustion in C.I. Engines* : Stages of combustion-diesel knock-effect of operating variables-knock rating of C.I. Engines fuels-Cetane number-effect of additives.

*Fuel Air Cycles* : Construction and use of combustion charts for unburnt and burnt mixtures-intake and exhaust processes-Analysis of fuel air cycles.

*Actual engine Cycles* : Time required for combustion effect of engine variables on actual cycle losses-power and efficiency of actual cycle.

*Combustion Chambers* : Requirements of combustion chambers. Types of Combustion chambers for S.I. and C.I. Engines-Advantage and disadvantage of each type-effect of parameters like turbulence.

*Spark Ignition System* : Characteristics of S.I. and C.I. Engines-Ignition system-Spark ignition Battery and magneted system-distribution and firing order-Automatic advance and retardation. Modern ignition systems.

*Engine Cooling* : Transient Heat transfer theory effect of operating conditions-Temperature gradient in engine parts-various methods of cooling-power absorbed in cooling.

*Super charging* : High altitude problems of I.G. Engines-supercharging. Suitability for S.I. and C.I. Engines-methods of supercharging types of superchargers.

*Special Engines* : Introduction to special engines like opposed piston opposed cylinder, free piston and multifuel engines.

*Performance* : Testing of engines-their performance and characteristics.

*Carburetion and Fuel Injection* : Fuel system for S.I. & C.I. Engines-Fuel air ratio requirements steady running and transient requirements-carburetion-various metering systems. Multicylinder engine requirements, Inlet manifold requirements. Fuel injection in S.I. Engines.

Fuel injection in C.I. Engines-Fuel pumps, Injectors types Air filters and Silencers.

Valve gears and Scavenging : Types of valve gears Ports, Poppet sleeve and rotary valves. Valve gear and driving arrangement.

Scavenging Process : Volumetric charging and scavenging efficiency-scavenging methods and systems for 4 stroke and 2 stroke engines.

*Lubrication* : Lubrication of different I.C. Engine parts. Engine lubrication Systems.

### 3. (a) MANUFACTURING DRAWING & MECHANICAL ENGINEERING DESIGN-I

*Design Philosophy* : Principles and procedure of design Recognition of need, Definition of problem, synthesis (Brain storming phase) Analysis and evaluation, optimisation and presentation. Aesthetic and functional design.

Preparation of design sketches. Selection of elements not involving design calculations. Part lists. Component and assembly drawings for production. Symbolic representation of accuracy, alignment, process instruction. Specification of limits, facts, tolerances, allowances, surface finish, heat treatment etc.

*Materials and processes* : Considerations governing the choice of material and manufacturing process for design. Material standardisation. Influence of rate of production.

Stress concentration and its influence on design.

Fits, tolerance, limits and surface roughness.

Design of castines.

#### *Design of C-Clamps, brackets :*

Design of crank shaft, line shaft and connecting rods.

Design of threaded members.

T breaded fastners; effect of initial tensions and applied loads-static and dynamic loads. Fatigue and creep considerations. Effect of temperature.

*Springs* : Laminated springs, helical springs-torsion compression, tension and cone springs. Negator springs, special springs. Graphical and numerical design methods.

Design of spur gears.

. Design of sliding and journal bearing. Selection of antifricition bearings.

#### 4—INDUSTRIAL ELECTRONICS AND SYSTEM CONTROL

1. Gas Tubes— Gas diodes, Thyatron, Ignitron.
2. Amplifiers — R.C. Coupled, Transformer coupled and direct coupled Amplifiers, Cathode follower; pushpull Class A and Class B Amplifiers.
3. Rectifiers — Single phase and polyphase rectifier circuits. Mercury and rectifier, controlled Rectifier.
4. Industrial Applications—(i) Relays and Timers. (ii) Resistance Welding (iii) Speed Control of D.C. Motors using armature voltage control (iv) Photo Electric cells, basic photo cell relays photoelectric smoke detector. (v) Induction and dielectric heating.
5. Servomechanism— Open and closed loop system principles of analysis of control systems, by differential equations, proportion rate and integral controls. (Basic Theory).

#### 5 a—ELECTIVE PAPER I-GAS DYNAMICS

Convergent and convergent-divergent nozzles: Variations of flow parameters with pressure ratio for different fluids Critical ratio. Conditions for maximum discharge. Effect of friction. Metastable flows.

*Shock Waves*—Normal shock waves-governing equations, Rankine Hugoniot relations. The Prandtl relations; shock Strength-weak Shocks. The Propagating Shock waves; converging diverging nozzle for normal shock waves. One Dimensional supersonic inducer-their characteristics & efficiency, the supersonic pilot tube.

*Flowthrough ducts*— Flow through constant area ducts, with friction but without heat transfer governing equations. Fanno lines, critical length, effect of in 1st Mach number, choking due to friction. Performance of long adiabatic duct fed by converging and converging-diverging nozzles.

Isothermal flow through constant area ducts with friction; governing equations. Hypothetical critical length

and limiting Mach numbers. Change of isothermal flow to adiabatic flow as Mach number approached limiting value.

Flow through constant area duct with heat transfer but without friction-governing equations. Reyleigh lines change in stagnation temperature due to heating and cooling, choking effects due to heating; generalized flow with friction, heat transfer and variable area-Influence unefficients. Wave interaction-experimental methods.

### Experimental techniques and flow analogies

Measurement of pressure and force optional methods; Determination of temperature; wind tunnel & its corrections-shallow liquid analogies and electric analogies.

### 5—(a) Elective larger-I Production Planning and Control

*Plant Organization*—Layout, material handling, maintenance services, personnel.

*Market Survey*—research and forecast.

*Product Design*—Functional and aesthetic design, value analysis, Working drawings. Material, process and dimensional decision.

*Process Planning*—Operational analysis. Flow diagram, flow process charts, sequence of operation, operation process chart, operation sheets, tool jigs and fixture design. Equipment requirement, precalculations.

*Production Planning*—Routing, scheduling, machine capacity, loading and allocation, dispatching, progress reporting expediting—Economic operating quantity.

*Machinery*—Selection cost, depreciation, capacity study, maintenance.

*Tool room practice*—Tooling procedure, tool classification crib, inventory release, record keeping.

*Quality Control & Inspection*—Specifications, inspection instruction sheet, organization, Inspection techniques 100% inspection, sampling, process control. Location and layout Measurement standards, equipment. gauges. control charts.

*Production Control*—Procedure, organization, activities function, analysis, data feedback and evaluation, communi-

cation channels, charts, and panels, Control boards, cantt charts, visible index or card systems. Punched card and tabulating systems.

*Material Management*—Procurement, standardization, inventory control. Economic lot size. Purchase versus manufacture decision. Purchase order, Followup record keeping, receiving inspection, sorting, release.

*Budgeting & Estimating*—Job estimating, raw material estimate, cost tooling\*, cost accounting, break-even point. Waste and spoilage-cost-report cost control. Budgets.

*Long Range Planning*—Net work techniques. critical path method.

#### 5 (a)—Elective paper I : Material Handling and Plant Layout

Types of materials handled in an engineering plant. Basic principles of materials, handling. Engineering and economics factors.

Classifications of materials, handling equipment according to operating principle, construction and nature of service.

Gravity equipment : Chutes, weel and roller conveyors. Gravity roller spirals.

Fixed systems of power driven conveyors: Belt, chain slot, apron, wire mesh, pallet, roller flight, cross bar and chain trolley type of conveyors. Arm, vertical slot vertical belt and suspended tray type of elevators. Reciprocating elevators. Industrial elevators screw conveyors. Ribbon Conveyors. Bucket elevators.

Skip Hoists, drag Scrapers, tramways and cableways. Pneumatics and hydraulic conveyors.

Cranes : Jig Electric overhead travelling (EOT) gantry and cantilever cranes.

Track systems : Overhead track or monorail system. Industrial railways. Locomotive cranes.

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\* Cost, direct & indirect labour costs, overheads depreciation, Job costs.

Portable conveyors; hand trucks, hand lift trucks and wheel jack. Self propelled equipment like high and low lifts trucks, Fork-lift trucks.

Container system of transport; Unit loads, standardization of unit load handling.

Coordination of handling with production—continuous repetitive and intermittent type. Balancing of assembly lines. Applications of time and motion study.

Organisation and selection of material handling system. Operation, maintenance and safety precautions. Selection of Plant layout from material handling criteria.

( The subject will be treated descriptive only )

## II Second Term

### 1 b—Measurements & Instruments and Control

#### *Metrology :*

Linear precision measurements. Instruments and indicators.

Engineering fits, limit gauges, production gauges.

Special precision measuring instruments; slip gauges. Screw thread and gear measurement, internal measurement, measurement of angles.

Comparators : Mechanical, Optional, electrical and pneumatic comparators.

Optical measurement : Optical flat, interferometry, surface finish measurement, straightness and flatness.

Automatic gauging, Correction, Speed of measurement, special applications.

Machine Tool Alignment tests.

Torque, mep, max pressure in engines.

#### *Instrumentation :*

Theory of errors : Definition, classification, statistics gauss Law, Least squares, precision index, probability estimation.

Direct measuring instruments for physical parameters, like pressure, vacuum, temperature, lift, velocity flow, acceleration, vibration, sound stress, strain viscosity, conductivity, gas analysis etc.

Strain gauges; equipment-Stress coat and other technique.

Transducers : Accelerometers, pickups, torsimeters with inductive piezzo-electric and photocell effect hot wire instruments.

## 2 b: Production Technology

Foundry Equipment : Mechanized handling of metal, charging moulding, pouring, casting and cleaning; melting furnaces, constructional and operational features of Cupla rotary, crucible and electric furnaces.

Forging : Machines and accessories, hammers and drop forging, dies and tools. Principles of forging tool design.

Powder Metallurgy : Powder production and pressing methods.

Finishing and superfinishing processes: Construction and operation of grinding, hanging and lapping machines. Selection of grinding wheels.

Special purpose Machine tools like automatic lathes, capstan, turret, screw machines and swiss automatics. Illustration of tool arrangements for the above machines.

Surface treatment and protective processes like metallizing plating, anodizing, sand blasting, tumbling, chemical cleaning, galvanizing and organic coating.

High energy rate processes-Explosive forming, electro-machining, ultrasonic machining, electron beam and laser beam machining.

Elements of plastic technology-Materials and processes.

Jigs and Fixtures Elementary treatment as applied to drilling, milling press working and inspection processes. Standard components. Holding devices for jobs and tools.



Outlines of general tool room practice; equipment prototype manufacture, manufacture and reconditioning of tools, jigs and fixtures.

### 3 b. Technical Dynamics-II

*Mechanisms with lower pairs* : Pentagraph, exact straight line motion, approximate straight line motion for engine indicator. Motor car steering gears, Davis and Ackermann types. Hooke's joint.

*Kinetics* : Piston effort, crank effort and turning moment diagrams. Fluctuation of energy and speed. Flywheels, Inertia force analysis.

*Gears* : Definitions, condition for correct gearing, velocity of sliding between two teeth in mesh. Tooth profiles—involute and cycloidal types. Interference and methods of reducing or eliminating interference. Helical Bevel and spiral & hypoid gears. Efficiency of spiral gears and worm and worm wheel.

*Gear Trains* : Simple, compound, reverted and epicyclic trains including Humpage's gear—Sun and planet mechanism Preselective and synchromesh gearboxes for automobiles.

*Cams* : Types of cams—radial and cylindrical. Profile of radial cams for simple harmonic, uniform velocity and uniform acceleration or deceleration types of motion. Displacement, velocity and acceleration curves for different cam-follower systems.

Gyroscopic motion with applications—elementary treatment of governors—Watt, Porter, Proell, and spring types—Effect of friction, Controlling forces and controlling force curves. Sensitivity, stability, isochronism and hunting. Effort and power of governors. Inertia governors.

### 4 b : Boto Machines-I

*Dimensional Analysis* : Units and dimensions, dimensional homogeneity, dimensionless ratio, Buckingham theorem, geometric dynamic and kinematic similarity. Model testing—Distracted models. Scale corrections.

*Dimensionless Parameters* : Specific speed pressure coefficient, discharge coefficient, power coefficient, reaction coefficient, characteristic coefficient, aerodynamic efficiency.

*Energy transfer between a fluid and rotor :* Euler turbine equation, Impulse and reaction. Generalised radial flow turbomachines, single stage velocity diagrams, energy transfer, reaction and efficiency. Generalized axial flow turbomachines. Single stage velocity diagrams efficiencies.

*Compressors :* Basic equations for efficiency and utilization factors for radial flow, axial flow and mixed flow compressors. General analysis, theoretical head-discharge relationship. Two stage velocity diagrams. Blade and Passage calculations. Theoretical torque and power requirement. Dimensionless parameters.

*Turbines :* Basic equations for efficiency and utilization factor for radial flow, axial flow, impulse, reaction and fifty percent reaction turbines. Methods of reducing rotor speed. Velocity diagrams for two stages calculation of main blade dimensions, thrust theoretical power and torque.

*Flow problems in Turbomachines :* Fundamental explanation of airfoil and cascade theory of design of blading. Difference in blade shapes in turbines and compressors. Effect of vortex flow. Cavitation; secondary flow loss and wall friction loss. Typical universal performance characteristics of a turbomachine and explanation of stalling and surge limits.

### *Incompressible Fluid Machinery:*

#### *Pumping machinery :*

*Axial flow pump :* types constructional details and application. Axial velocity and pressure distribution in side vanes, impeller and diffuser. Specific speed characteristic curves, stalling and surging.

*Centrifugal pumps :* types, constructional details and applications. Volute and whirlpool chambers. Manometrics and hydraulic efficiencies. Specific speed characteristic curves. Multistaging. Series and parallel operation.

*Mixed flow pumps :* constructional details and applications.

*Turbines:* Classification. Relative performance on speed and specific speed, basis; load efficiency curves. Governing of turbines; governing systems, types of governors. Introduction to penstocks, spiral casing, draft tubes and

surge regulations. Applications and typical layout of each type. Pumped storage systems.

### 5 b: ELECTIVE PAPER II HEAT & MASS TRANSFER

**Conduction :** One dimensional conduction-solids with inner heat sources-Heat transfer from rods heated at one or both ends. Practical applications of Heat transfer from extended surfaces. Application to engine cylinders, radiator tubes.

Two dimensional steady condition: numerical graphical and analogy methods of solution for simple cases. Relaxation method. Conduction of heat in Unsteady, State-transient and periodic heat flow-Transient heat flow in systems with internal resistance-use of chart Analytical. Solution, relation method and electrical analogy for solving transient heat conduction problems. convection: Heat transfer during change of phase-fundamentals of boiling heat transfer-nucleate and film building. Heat transfer, transfer in condensation-dropwise and film condensation. Hydrodynamic theory of convective heat transfer. Combined heat and mass transfer.

**Radiation :** Radiative heat transfer-basic laws-view factor & its calculations-use of charts-calculation of radiative exchange in furnace enclosures by finite difference & analogue methods. Radiation from gases & flames.

**Mass Transfer:** General discussion of transport Phenomenon, diffusion of mass, momentum & energy through, fluids-Fick's, Newton's & Fourier's laws, diffusivity-viscosity and conductivity, prandtl, Louis and Schmidt numbers. Diffusion in binary mixtures-equimolar counter-diffusion.

Wet bulb & dry bulb hygrometer-adiabatic Saturation temperature-condensation in steam air mixtures.

Combined modes of heat and mass transfer :

Application to wires insulated pipes, annular passages extended surfaces and design of heat exchange equipment like shells and tube, heat exchangers, tube and fin heat exchangers regenerative heat exchangers and cooling towers. Pressure drop flow rate and overall heat transfer-coefficient in heat exchange equipment.

**Theory of models :** Experimental methods of heat transfer investigation. Testing of heat exchange equipment.

## 5 b: ELECTIVE PAPER II-PRODUCTION MACHINES :

Copying Lathe : Control systems. Components and templates for lathe work. Copy-milling machine.

Precision boring machines. Types, dimensional stability. Measuring equipment. Special features.

Machines for Production of level and Worm gears. Operating and constructional features.

Introduction to hydraulic and pneumatic systems and applied to drive and control of machine tools. Programme control of lathes and milling machines.

Introduction to numerical controls of Machine Tools. concept, numerical codes, data processing, programming, error feed back point to point and continuous path control, Economics, application and limitations.

Transfer Machines. Types, applications and limitations.

Principles of planning of machine processing; sequence of operation, floor to floor time, profiling for production, illustrations as applied to automatic machines.

## 5 B: ELECTIVE PAPER-II-EXPTL. STRESS ANALYSIS :

*Model Analysis* : Principles of similitudes-spline models.

*Strain gauges* : Mechanical mechanical-optical, optical, scratch type strain gauges.

Elective strain gauges, capacitance, inductance and resistance type strain gauges. Types of electric resistance type strain gauges.

Stress Analysis by strain gauges. Graphic solutions for determination of principal stresses and principal planes from rosettes data.

*Photoelasticity* : Principles of photoelasticity. Isochromatics, isoclinics and stress trajectories. Photo-elastic material and their selection and calibration. Evaluation of principal stresses using slope equilibrium method.

*Brittle Lacquer Method* : Characteristics of brittle coating Analysis of Crack pattern. Dynamic strain measurements by brittle coatings. Residual stress determination.

Membrane analogy and its application. Electrical ana-

logy and its application. Hydrodynamic analogy and its application.

### Final B. E. (Mech)

#### I First Term.

#### 1 a : *Roto-Machines-II*

##### *Fans, blowers and compressors :*

Axial flow machines: Principle of operation and basic constructional features. Classification. Pressure-velocity distribution for pre-guide vane and post-guide vane single stage, and multistage compressors. Methods of pressure recovery. Performance of compressors and comparison of various types. Performance limits; stalling and surging. Applications. Fans and air-screws.

Centrifugal compressors; Principle of operation and basic constructional features. Vane and channel shapes. Types of impeller construction; open ended, closed ended, single and double entry, mixed flow impellers. Prewhirl, pre-rotation and limiting inlet velocity. Volute and vortex chambers, change-over sections, diffusers and discharge casing. Operating characteristics, losses, surging choking, performance factors, relative dimensions less characteristics and efficiency. Series and parallel operation. Single and multistage construction. Application of compressors to supercharging high pressure compression and gas turbine plants.

*Gas Turbines :* Open cycle plants; Influence of various parameters like pressure ratio, component efficiency intercooling, reheat and regeneration on operating characteristics, Multishafting. Governing systems and controls. Design of combustion chambers. Gas turbine fuels and fuel systems. Application to jet propulsion.

Closed cycle plants; operating cycles. Advantages over open cycle and steam plants. Selection of pressure limits and pressure ratios. Governing Application to binary vapour and nuclear plants.

Combination of gas turbines with steam turbines and free-piston gasifiers.

Matching of turbines and compressors.

## *Steam Turbines:*

Classification: base load, auxiliary, pass out, exhaust and back-pressure turbines. Combinations of cylinders and flow. Special constructional features of steam turbines. Lubrication systems. Governing; throttle control, nozzle control and by-pass governing Governors: mechanical, oil relay and emergency trip governors. Starting and stopping procedure. Performance and operating characteristics of steam turbines. Matching of modern boilers and steam turbines.

Steam condensers: types and construction. Application of steam turbines to locomotive marine, industrial and central power stations.

Final B. E. (Mech)

## **I First Term**

### *1. a. Roto-Machines-II*

#### *Fans, blowers and compressors:*

Axial flow machines: Principle of operation and basic constructional features. Classification. Pressure—velocity distribution for pre-guide vane and post-graduate vane single stage, and multistage compressors. Methods of pressure recovery. Performance of compressors and comparison of various types. Performance limits; stalling and surging. Applications. Fans and air-screws.

Centrifugal compressors: Principle of operation and basic constructional features. Vane and channel shapes. Types of impeller construction; open ended, closed ended, single and double entry, mixed flow impellers. Prewhirl, pre-rotation and limiting inlet velocity. Volute and vortex chambers, change-over sections, diffusers and discharge casing. Operating characteristics, losses, surging choking, performance factors, relative dimensions less characteristics and efficiency. Series and parallel operation. Single and multistage construction. Application of compressors to supercharging high pressure compression and gas turbine plants.

*Gas Turbines:* Open cycle plants; Influence of various parameters like pressure ratio, component efficiency inter-cooling, reheat and regeneration on operating characteristics. Multishafting. Governing systems and controls. Design of combustion chambers. Gas turbine fuels and fuel systems. Application to jet propulsion.

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Steam condensers: types and construction. Application of Steam turbines to locomotive marine, industrial and central power stations.

## 2. a. TECHNICAL DYNAMICS—III

Balancing and rotating masses in one plane and in different planes. Balancing of reciprocating masses. Primary or secondary balancing. Partial balancing & its effects. Direct and reverse crank methods. Application of balancing to locomotives in-line engines, vee engines and radial engines.

Theory of one, two and multi-degree freedom systems Free Vibrations. Longitudinal transverse and torsional.

Damping: Different types of damping with application of viscous coefficient concepts.

Forced Vibrations: steady and transient states. Torsional vibrations of multi-rotor upto three rotors and gear systems. Transverse vibration of multimass system, approximate methods of determining natural frequencies and modes. Critical whirling speeds of shaft and rotors.

Transmissibility: Vibration isolation. Dynamic vibration absorbers.

Introduction to numerical, graphical and analogy methods in vibration problems.

## 3. a. INDUSTRIAL PSYCHOLOGY AND MANAGEMENT

1, *Human relations*: Interpersonal aspects, motivation and leadership in groups, psychological tests in interviewing

for selection and promotion. Background of Indian industrial workers. Social and economic conditions. Organization of employers and workers. Pattern of trade unionism and Industrial relations in democratic economy.

2. *Personnel Management*: Adaptability of personnel management to industrial evolution in India. Recruitment, selection, placement, training, promotion and discharge procedures. Performance appraisal of industrial and administrative workers.

3. *Wage and other incentive systems*: Profit sharing fringe benefits etc. for higher productivity.

4. *Social security administration*: Physical security, health, safety, social insurance and pension provident fund schemes. Responsibilities of entrepreneurs.

5. *Industrial legislation*: Introduction to the intent and scope of industrial legislation. Channels of handling discipline and grievances.

6. *Scientific management*: Meaning, concept, and function. Principles of scientific management.

7. *Industrial Organization*: Types of organisation, organisation charts, time staff and lateral organization, delegation and decentralization, organization of public sector undertakings, private undertakings, Engineer's Cooperatives and Small Scale industries. Registration procedure for companies. Preparation of balance sheets for small industries.

8. *Planning of Engineer's Cooperatives and small scale Industries*: Techniques Plan execution, assistance from the State, Banks and Technical Organizations.

9. *Management accountancy and financial control*: Sources, period and application of capital. Working capital, long term loan, deposits, hypothecation and clean credit. Hire purchase schemes. New Projects, profitability of operation and return on capital. Comparative statement, budgetary control and reports. Special reference to small scale industries.

10. *Market and Sales Management*: Market survey and research. Sales forecasting. Break even point. Pricing and terms of sale promotion methods. Visual and other publicity. Promotion programmes. Exporting and export incentives. Industrial recession as compared to slump. Product diversification.



11. *Pricing of a product*: Direct and indirect costs. Labour and material costs. Prime and overhead costs. Depreciation. Gross and net profits.

#### 4. a. ELECTRICAL PAPER-III STATISTICS AND OPERATIONS RESEARCH

*Theoretical frequency distribution*: Elementary concepts. Normal, binomial and Poisson distribution.

*Elementary sampling theory*: Large and small sample tests. Random sampling. Goodness of fit. Analysis of variance.

*Sampling and statistical inference*: Statistical quality control. Control charts and applications to industrial quality control. Acceptance sampling.

*Certainty and uncertainty models*: Waiting line theory. Monte Carlo method. Inventory models. Profit maximization and cost minimization models.

*Operations research tools*: Game theory. Queueing theory. Graphical risks analysis. Linear and non-linear programming methods.

*Electronic data processing*: Business machines. Punch-card and punch-tape systems. Elementary concepts of analog and digital computers. Application. Review of computer languages.

*Fortran programming*: Matrix operation. Elements of Fortran language. Programme preliminaries. Format specifications. Fortran compilation. Function statements. Errors and mistakes.

#### 4. a. ELECTIVE PAPER III : WORK STUDY

*Definition and scope*: Taylor's principle, motion study as defined by Gilbrein. Micromotion study, cyclograph. Different uses of work study. Method Study: Development of a better method. Flow process chart, operational process chart, Gantt charts, man-machine charts and simo charts-use and application.

*Micromotion Study*: Purpose. Aid in improving the method. Fundamental hand motion and principles of motion economy. Application to workplace layout and design of equipment controls.

*Time Study*: Unit of work measurement. Stop watch study. Time study equipment and procedure. Timing and rating of operators. Determination of allowances and standard times. Data processing and presentation of results.

*Other techniques of working measurement*: Production study. Ratio delay method. Synthetic time. Analytical estimating.

Training programme: Training at various levels for work study. Effect of workplace conditions, practice and the pace on operator performance. Learning curve. Personnel rating for operations where work study cannot be applied. Merit rating systems.

#### 4. a. ELECTIVE PAPER-III

##### *Bearing and Lubrication*

Industrial lubricants and their applications. Additives for lubricants. Standard Specifications.

Thin film lubrication—theory of hydrostatic lubrication. Theory of hydrodynamic lubrication of slider, journal and thrust bearings. Reynold's differential equation for pressure distribution. Mitchell's solution for bearing of finite width. Porous bearings.

General design considerations for journal bearing; lubrication grooves and passages. Power loss and heat dissipation. Life of bearings. Bearing materials. Constructional details.

Principle of gas lubrication.

Bearings with rolling contact. Pressure distribution. Ball, roller and needle bearings; selection procedure for various applications. Lubrication methods. Oil retainers and Oil seals. Packed bearings.

#### II Second Term

##### 1. b. REFRIGERATION AND CONDITIONING.

*Air Refrigeration Plants:* Air cycles, Heat pump cycle, Bootstrap system and its application in aircraft air conditioning.

*Vapour Compressor Plant:* Use of multistage compressors, heat exchangers, receivers, precoolers and flash chamber—their effect on C. O. P. Compressor refrigeration machines, their characteristics and constructional details—compressors—open sealed and semisealed units, capacity control compressor, installations, compressor performance—evaporations their performance, control and application considerations, types—common refrigerant mixtures.

*Vapour absorption plants:* System components—generator, rectifiers, condensers, absorber, heat exchanger and water pump properties of Aqua-Amonia and lithium bromide and water system. Vapour absorption plants.

*Controls:* Basic considerations methods of control, control of temperature, pressure, humidity and view point. Types

of controllers; pneumatic electric. Year round control system. Automatic controls and safety devices.

Maintenance and trouble shooting.

*Comfort:* Comfort & comfort charts, effective temperature, maximum tolerable and design condition, Air circulation, ventilation and purification. Standards and methods.

*Estimating Requirements:* Heating, cooling, humidifying and dehumidifying requirements. Losses: Building transmission; infiltration and air charges. Heat gain from people, light and power duct heat gain. Winter and summer design conditions. Supply air quantity and temperature requirements—supply duct air leakage.

*Heating systems:* Introduction to hot water, steam and air heating systems. Piping and accessories.

*Ducting systems:* Pressure losses in ducts, duct materials and sizing—design of return and exhaust system, Duct heat gains and losses—Heat insulation—Air leakage and duct maintenance. High velocity and high pressure air distribution. Direction and volume control, outlet location—return and exhaust grilles.

*Humidification & dehumidification:* Humidification and dehumidification methods, Evaporative cooling; wet water cooling, Air washers and Air cleanliness, maintenance of air washers.

*System Planning:* Preliminary layout—load estimate—system design—zoning methods. Analysis & economics,

*Commercial & Industrial systems:* Air conditioning multiroom structures, offices, apartment, houses, hospitals, Hostels, Restaurants, Theatres and Libraries. Air conditioning of factories textile mills, pharmaceutical plants. Applications to cold storage, food preservation, water coolers, ice manufacture and display cases. Transpiration air conditioning. Load estimating, process requirements, system selection.

## 2. b. MECHANICAL ENGINEERING DESIGN-II

*Flywheel:* Rim, solid disc and split types.

*Brakes and Clutches:* Internal and external shoe brakes Clutches; Cone type, disc type centrifugal Type and internal expanding ring clutches. Overrunning clutch.

*Springs:* Laminated springs. Helical spring; torsion, compression and tension springs.

*Bearings:* Sliding element bearings, Rolling bearings (selection only).

*Gears:* Spur, helical, bevel and worm.

*Be-arings:* Sliding element bearings, Rolling bearings (Selection only).

*Gears:* Spur, helical, bevel and worm.

### 3. a. SYSTEM DESIGN

Philosophy of Design. Design cycle. Design morphology. Problem formulation. Feasibility study. Concept search. Concept formulation. Preliminary design Detailed design. Decision making. Optimisation. Examples and case studies. Project procedure.

### 4. b. ELECTIVE PAPER IV-POWER STATION PRACTICE

*Thermodynamics Steam Turbine cycle:* Calculation for regenerative feed heating, reheating & water extraction cycles, choice of extraction and reheat pressures.

*Design & Construction of Steam Turbine Components:* Nozzles & diaphragms, turbine blades & blade attachments, Turbine rotors, Cylinders, Glands & Packings, Bearings-

*Governing systems for Steam Turbines:* Types of governors and emergency governors.

*Selection of Gas turbine Power Plants:* Hoice of cycle, open & closed cycle plants, comparision with steam and diesel plants. Turbine cycle efficiencies, cambustion, combu-  
stion chambers, compressors, Heat exchangers, Fuels for Gas Turbine plants.

*Diesel Electric Plants:* Diesel Plant Elements, Fuel injection systems, lubrication system, Intake & exhaust system, Fuel system, cooling system, starting system.

*Hydro-electric Plant:* Classification & application of hydroelectric plants. Capacity calculation for Hydro power and selection of storage reservoir, Plant layout, Surge towers, choice of type and size of turbines. Turbine setting. Selection of draft tubes, Turbines governors. Selection of plant auxiliaries, Automatic & Remote control of hydro plants. Pumped storage Projects.

*Nuclear Power Plants:* Nuclear reactor Reactor operation, thermodynamics & cycle arrangement of Pressurised water reactor, Boiling water reactor, Sodium graphic reactor. Fast breader reactor, Gas cooled reactors. Safety in nuclear power plants.

*Combination of Prime Movers:* Combined steam turbine -gas turbine cycles, supercharged boiler, Exhaust fired and hot air turbine combined cycles.

*Instrumentation & Automatic controls:* Automatic control equipment for control of combustion, steam temperature, feed water and steam Pressure.

#### 4. b. ELECTIVE PAPER IV-PROGRAMME ENGINEERING

Theory of Decision Making: Probabilistic approach. Application to inventory, production batch size, manufacturing and sales.

Methods of programming: Static and Dynamic programming. Application of operation research methods and programming linear and non Linear programming. Simplex, transportation and assignment techniques.

Quadratic, stochastic and integer programming.

Programming of multi product production. Schedule. Product sequencing. Heuristic approach to job shop scheduling for machine allocation.

Critical path method and programme evolution and review techniques as applied to repairs, maintenance and manufacturing facilities, assembly, despatching and sales decisions.

Market analysis and its impact on programming of research and development activity.

Programming of addition of facilities with system's approach.

#### 4. b. ELECTIVE PAPER IV : PRODUCT DESIGN

Importance and necessity of product design, Philosophy and methodology of product design, factors affecting product design and their measurements.

Production drawings and specifications. Fixing of tolerance and clearance in product design.

Design considerations:

Range design. Similarity. Preferred numbers, selection of speeds standardization and simplification in designs. Optimization in product and component design.

Product life and reliability Criteria. Design on the basis of manufacturing process, suitability, rate of production and economy of manufacture.

Stages of product development, time and cost involved.

Science of decision making, various theories of decision making viz. games theory, maximum gain theory, minimum regret theory.

Selection and planning of the process of manufacture. Manufacturing sequence and mechanization and equipment.

Management and control of design projects. Trends in systems engineering and value engineering estimation of product cost.

The above principles may be fully illustrated through a project work on one or two machines or equipment.

### THIRD B. E. (ELECTRIC)

#### I First Term

##### 1. a. CIRCUIT ANALYSIS I

###### 1. Foundations of Electric Circuit Theory.

Fields and Circuits, Resistance, Resistor, Capacitance, Capacitors, conductors and Insulators, Inductance, Further Consideration of Circuit Elements, Circuits, Networks and Krichhoff's Laws. The Combination of Branches of Like Kind. D-C Circuits in the Steady State, Physical Circuits and Their Models, An Inductor of Simple Geometry, A Capacitor of Simple Geometry, Skin Effects.

###### 2. Transients in Simple Circuits.

Simple circuits and Transients, First order Linear Equations. The RL Circuit, The RC circuit Time constant, Properties of the Exponential, First order Nonlinear Equations, Piecewise Linearisation The Linear Second order Equation. The Linear LC Circuit. Duals, Resolution of the Time-Scale and the Accuracy of Models.

###### 3. Introduction to Driven Circuits:

Driven Circuits, Solution by an Integrating Factor, Initial Conditions, Singular Models, Transients and the Steady State. A short procedure for constant driving Forces, Multiple Driving Functions. Superposition, Uniqueness of Forced Response, Piecewise Linearization. c, a superposition Integral.

#### 4. Network Topology and Network Equations:

Introduction, Definitions, What is a solution? Topology, The Tree, The Number of Independent Voltages, The Number of Independent Currents, Loop and Mesh Currents, Vs. Node Voltages, Simultaneous Differential Equations, Evaluation of the Constants in the Solution. Dual Networks.

#### 5. Reduction Techniques for Networks:

Introduction, Network Reduction by Series and Parallel Combinations. The wye-delta Transformation. The use of Superposition, Interchange of Voltage and Current Sources, Thevenin's and Nortons Theorems. The Reciprocity Theorem. A Resistive Network with a Single Nonlinear Element. The Load Line.

#### 6. Fourier Analysis of Nonsinusoidal Waves:

Nonsinusoidal Waves. The Fourier Series, Considerations of Symmetry, The Error Resulting from a Number of Terms, Effective Values, Volt-amperes, Power, and Reactive Power, Network Solutions, Amplitude and the Phase spectra, Fourier Analysis vs. Transient Analysis, Exponential Form of the Fourier Series, The Fourier Integral.

#### 7. Polyphase System:

Polyphase, Voltages, The phase, Source, The phase Systems, Power Measurement in a phase system, Balanced Three-phase System. Unbalanced Three-phase Systems, Symmetrical Components, Generated Harmonics in Balanced Systems, Transformers in Three-phase Systems.

### 2 (a) *Mathematics VII-(E)*

#### *Differential Calculus :*

Continuity and differentiability of functions of one variable. Rolle's theorem and Mean-value theorems. Evaluation of indeterminate forms, De'l Hospital rule Maxima and minima of functions of two independent variables.

#### *Differential Equations :*

Differential equations of second order with variable coefficients. Variation of parameters. Solutions in series and their applications.

#### *Infinite Series :*

Simple tests for convergence, Fourier series and Harmonic analysis.

*Matrices :*

Definition. Addition, subtraction and multiplication of matrices. Transpose, Conjugate, Adjoint and inverse of matrices. Application to the solution of linear simultaneous equations. Characteristic equation, Cayley-Hamilton theorem.

*Numerical Analysis :*

Finite differences, forward and backward differences, Newton's forward and backward difference interpolation formulae, Numerical differentiation and numerical integration (Trapezoidal rule and Simpson rule).

Solution of first order differential equations by methods due to Piccard, Runge-Kutta.

3. a. ELECTRONICS-I.

1. Electron Ballistics :—Basic ideas about motion of electrons in electric and magnetic fields.
2. Characteristics and principles of operation of gas diode, thyatron, and ignitron.
3. Rectifiers :—Analysis of halfwave and full wave rectifiers using vacuum and gas diodes. Approximate analysis of rectifier filters.
4. Basic vacuum tube Amplifiers :—Graphical Analysis, Equivalent Circuits; Grounded Cathodes, grounded grid and grounded plate (Cathode follower) amplifiers; Audio frequency voltage amplifiers.
5. Basic Transistor Amplifiers :—Graphical Analysis, Equivalent Circuits, Analysis of basic small signal transistor amplifier. Parameters, bias and stabilization, frequency response of RC. coupled common emitter amplifier.
6. Feed back Amplifiers :—Basic concepts about feed back in amplifiers; Effect of feed back on input and output impedances Basic vacuum tube and transistor current and voltage Feed back circuits, Nyquist Criterion for the stability of inverse feed back circuits.
7. Untuned power Amplifiers :—Class A Vacuum tube power amplifiers; class A vacuum tube push pull amplifier, class B idealised push pull vacuum tube power amplifier, basic



ideas about single ended and push pull transistor power amplifiers.

8. Tuned Amplifiers :—Electron tube and transistor single tuned voltage amplifiers, Basic ideas about double tuned voltage amplifiers, Basic ideas about tuned power amplifiers.

#### 4. a.—STRENGTH OF MATERIALS & THEORY OF STRUCTURES

##### I ( C & E )

- (a) Stress and Strain—Hooke's Law, tension, compression and shear, complementary shear stress. Poisson's ratio, Elastic constants and their relations for an isotropic material. Temperature stresses and composite bars. Elastic and plastic behaviour and common materials in tensiles and compressive tests, characteristic stress strain curves. Ultimate strength Working stress and factor of safety. Resilience and suddenly applied loads.
- (b) Principle planes, stress and strains, ellipse of stress, ellipse of strain. Mohr's circle diagram. Theories of elastic failure.
- (c) Thin cylinders and shells—stresses and strains in thin cylinders and spherical shells.
- (d) Bending moment and shearing force diagrams under static loads concentrated, uniformly distributed and uniformly varying loads on cantilevers, simply supported and overhanging beams. Theory of simple bending, distribution of normal stress due to bending, section modulus.
- (e) Shear stress distribution in rectangular, circular, tee and I Sections.

#### 5 a.—ELECTRICAL MACHINES—I

##### Basic Theory of Transformers.

1. E.M.F. Equation, No load Conditions, Ideal transformer, equivalent circuits, O.C., S.C. and Back to back tests. Efficiency and voltage regulation Effect of Frequency, Magnetising current in single and polyphase transformers and causes of harmonics. Auto transformers, Polyphase transformer connections and phase conversion. parallel operation.

2. Principle aspects of electromechanical conversion-Rotating machinery, Basis of operation, Electric generators and motors, Energy balance in Electromechanical energy conversion singly Excited magnetic system.

3. Basic concepts of machine performances :—

Armature winding as current sheets. Torque in electric machines, Interpretation of torque equations-optimum condition for protection of Motor torque, voltage generated in electric machines, commutator action.

## II—Second Term

### 1.b—CIRCUIT ANALYSIS-II

1. Coupled Circuits—

Conductively coupled circuits, Mutual impedance, Magnetic coupling Mutual inductance, co-efficient of Magnetic coupling circuit, directions and sign of mutual inductance between portions of the same circuit, mutual inductance between parallel branches. Transferred impedance, primary unity-power-factor resonance, partial-resonance double tuned circuit analysis.

2. Impedance and admittance functions—

The concept of complex frequency. Transform impedance and admittance, series and parallel combinations.

3. Network Functions—

Terminals and terminal pairs, Driving-point impedance Transfer functions, poles and Zeros, Restrictions on pole and zero locations in  $s$ -plane. Time domain behaviour from pole and zero plot procedure for finding network functions for general two terminal pair networks.

4. One-Terminal pair Reactance Networks :—

Reactive networks. Separation property for reactive networks. The four reactance function forms, specifications for reactances functions. Foster form of reactive networks, Cauer form of reactive networks. Choice of network realisations, use of normalised frequency.

5. Two-Port General Network—

Two Port parameters (Impedance Parameters,) Admittance Parameters, Hybrid Parameters, ABCD Parameters and their Interrelations, Equivalence of two ports, Transformer Equivalents, Interconnection of two port Networks.

#### 6. Two Port Reactive-Network (Filters)—

The Ladder network. Image impedance, Image transfer function, Application to L.C. networks. Attenuation and phase shift in symmetrical T and  $\pi$  networks. Constant K-filters, The m-derived filter, Image impedance of m-derived half (of L) sections, Composite filters. The problem of termination Lattice filters. Bartlett's bisection theorem.

### 5.b—MECHANICAL ENGINEERING—III (E)

Internal energy, enthalpy and change of heat work done.

Calculation of entropy, for thermodynamic processes on steam.

Steam power cycles—Rankine & modified Rankine cycle.

Steam nozzles : Flow of steam through nozzles, critical pressure ratio; super saturated flow; effect of friction, conditions for maximum discharge.

Steam Turbines : Impulse and reaction types, methods of compounding, velocity diagrams.

Steam turbine cycles : Bleeding, reheating and regenerative feed heating. Stage efficiency. Overall efficiency.

Constructional features of steam turbines. Governing of steam turbines and governors. Special turbines, like passout, back pressure and mixed flow turbines.

Steam Condensers : Types, construction and working principles. Calculation of cooling water requirement and vacuum efficiency, sources of air leakage, combined and separate extraction pumps.

Cooling towers and spray ponds.

Air compressors : Working cycle of single and multistage reciprocating compressors, condition of minimum work. Effect of clearance, intercooling and suction conduction.

Imperfect intercooling. Air horse power, shaft horse power, volumetric isothermal, adiabatic and overall efficiencies. Constructional features and safety devices.

Rotary compressors : Positive displacement and aerodynamic type. Principle of working constructional features and polytropic index. Power requirement and efficiency.

Filtering of air.

Internal Combustion Power Plants : Schematic Layout, maintenance, log book. Selection, power limits.

Introduction to machine tools : Like Lathe, shaper drilling machine, Milling machine, turret lathe, grinders.

Forging and pressworking : Power hammers, forging dies, power presses, press working dies.

Welding : Oxyacetylene gas welding and equipment. Oxyacetylene torch cutting. Thermit welding. Soldering and brazing. Arc welding and its equipment. Electrodes-classification and applications. Resistance welding.

### 3.b—FUNDAMENTALS OF ELECTRICAL MEASUREMENTS.

Classifications : General considerations of deflection, control and damping. Equation of motion. Construction and principle of operation of :

D'Arsonval, Ballistic and Vibration galvanometers. Flux meters, ratio meters and Megger. Electrodynamometer. Wattmeter errors. Electrostatic voltmeter, Ammeter and Wattmeter. Induction voltmeter, Ammeter and Wattmeter. Induction voltmeter. Single phase watt hour meters, errors and their compensation Power factor meters, synchroscopes, frequency meters, Max demand. Indicators.

Polyphase metering : Blondel's theorem for n-phase p-wire system measurement of power and reactive KVA in 3-phase balanced and unbalanced circuits.

Potentiometers : Theory of operation of direct reading D.C. Potentiometers, construction, standardisation, Principles

ples of A.C. Potentiometers Polar and coordinate types. Construction, standardisation and their uses.

#### Measurement of Resistance :

Four terminal resistance, voltmeter and ammeter methods and their limitations Potentiometer method. Kelvin double bridge Surface and volume resistivity. Price's guard wire method, loss of charge method, absorption effect.

*A.C. Bridges* :—Generalised treatment of 4 arms a.c. bridges. Sources and detectors. Maxwell's inductance bridge, Maxwell's inductance-capacitance bridge, Hay's bridge, Anderson bridge, Heaviside bridge, Heaviside Campbell bridge, Desautys Schering's bridge Wein's bridge, sources of errors in bridge measurement screens and wanger earth.

#### High Voltage Measurement :

General classification and purpose of H.V. testing methods, High Voltage Alternating current sources high voltage Direct current sources, Impulse voltage sources. Apparatus for voltage measurement—sphere gap, Potential dividers Cathode-ray oscillographs.

#### *Instrument Transformers* :

Current transformer and potential transformers, construction, theory ratio and phase angle errors, Effects of Variation of power factor, secondary burden, and frequency Testing, precautions in using current transformers.

### 4. b STRENGTH OF MATERIALS & THEORY OF STRUCTURE II ( C & F )

(a) Relation between load, Shearing force, bending moment, slope and deflection. Slopes and deflection of cantilevers and simply supported beams by Macaulay's conjugate beam and moment area methods, plate springs.

(b) Combined bending and direct stress—Eccentric loading—Wind pressure on walls and chimney shafts—Water pressure.

(c) Torsion—Shear stress in solid and hollow circular shafts; angle of twist, power transmitted by a shaft under pure torsion. Combined bending and torsion and axial thrust.

Stress and deflection of closely coiled circular section springs.

(d) Columns—Long and short columns, axial and eccentric loading, ideal strut, Euler's formulae for Crippling load, end conditions and equivalent length of struts, Rankine, Gordon, Parabolic and straight line formulae. Perry's formulae.

(e) Frammed structures—Simple plane frames, perfect frames subjected to static loads. Determination of reactions at supports and forces in members.

(f) Rivets and riveted joint—Rivet value, minimum and maximum pitches, safe edge distance. Splicing of a plate or plates. Eccentrically loaded joints.

## 5. a ELECTRICAL MACHINES I b

### 1. D.C. Machines D

Construction : Armature windings, generated voltages, Magnetic fields, flux and M.M.F. distributions, commutation, commutating and compensating windings. No load and load characteristics, Armature cross magnetising and demagnetising M.M.F. Analysis of generator performance, Analysis of Motor performance.

### 2. D.C. Machines II

Speed control and starting of motors, parallel operation of generators, losses and efficiency, testing of d.c. machines, Applications.

## IV B.E. (Elec.)

### I First Term

#### 1. (a) *Mathematics VIII (E)*

##### *Calculus :*

Differentiation and integration under the sign of integration. Improper Integrals.

##### *Differential equations :*

Elementary partial differential equations of first and

second orders and first degree. Laplace's equation and Wave equations.

### *Special Functions :*

Legendre's equation, Legendre polynomials, generating function, recurrence relations, simple properties of  $P_n(x)$  and  $Q_n(x)$ , simple integral representations.

Bessel's equation, solution for Bessel's equation of zero order, Bessel function of integral order, recurrence relations, simple integral representation, generating function.

### *Vector Calculus :*

Gradient, divergence and curl, Line, surface and volume integrals, Gauss, 'Stokes' and Green's theorems.

### *Laplace Transforms :*

Definition and simple rules of Laplace transforms, Inverse Laplace transforms, application to the solution of second order linear and partial differential equations.

## 2. (a) ELECTRICAL MACHINES III

1. General Equations of Induced Emf—Effect of Distribution Chording and Skewing of Induced Emf Speed and transformer volta gas.

Armature and Field Mmfs—Effect of Power Factor and Magnitude of current on Armature Mmf. Mmf. Harmonics caused by winding Distribution and Saturation—Rotating Fields.

2. Induction Motors.

Construction—Basic Principles—Flux and Mmf waves Induction Motor as a Transformer—Equivalent Circuits—Circle Diagram—Calculation of performance, Torque-Slip curves Effect of Rotor Resistance—Cogging, Crawling—Starting-speed control losses and Efficiency, Testing—Induction Regulator.

Single phase Induction Motor—Revolving Field Theory and Cross Field Theory Starting Methods.

3. Synchronous Machines.

Construction—Basic principles Flux and Emf waves—

Theory of cylindrical Rotor and Salient pole Machines—Two Reactance. Theory—O.C.S.C. and Zero power Factor characteristics—Potier Triangle ASA Method of Finding Regulation—V-curves, O curves and power Angle characteristics—Parallel operation—Synchronising—Hunting and its prevention.

### 3. (a) TRANSMISSION AND DISTRIBUTION OF ELECTRIC POWER

General principles of transmission and distribution, Overhead and underground systems, D.C. and A.C. Svstems, choice of voltage, frequency and number of phases, comparison of different systems of transmission and distribution, radial, ring and interconnected systems.

Line parameters : Resistance : Skin, proximity and spiral effects. Inductances any number of conductors, single and three phase lines, Capacitance: Single and three phase lines, effect of earth. Electrostatic and electromagnetic interference of transmission lines with communication circuits. Transposition. Corona.

Performance of short, medium and long transmission lines. Nominal T and nominal  $\pi$  and regourous solutions, Generalised circuit constants, circle diagram, travelling waves; characteristic impedance, natural frequency of transmission lines, reflection at open, short circuited and forked ends.

Insulation of overhead lines: Types of insulations, voltage distribution along a string of insulators string efficiency, grading and testing.

Underground Cables : Types, construction, voltage gradient methods of grading of insulation, super voltage cables, thermal characteristics.

Power system stability : Steady state and transient stability limits, swing equation, equal area criterion of stability methods of increasing stability limit.

Symmetrical components: Symmetrical components of unsymmetrical phasors, positive sequence impedance circuit elements. Solution of unsymmetrical single line to ground and line to line fault recommended generator by the method of symmetrical. Components

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## 4 a HYDRAULICS

1. *Fluids* : Definition; Ideal Fluids, Real Fluids, Newtonian and Non-Newtonian Fluids.

2. Properties of Fluids : Units of measurement, Mass Density, Specific Weight, Specific Volume, Specific Gravity, Viscosity, Surface tension and capillarity, Compressibility and Elasticity,

3. *Hydrostatics* : Pressure at a point in a static fluid; Pressure variation in an incompressible static fluid, Atmospheric pressure, Gauge pressure, Vacuum pressure, Absolute pressure, Manometers, Bourdon tube pressure gauge, Forces acting on immersed plane surfaces. Centre of pressure, Forces on curved surfaces.

Bouyance—Conditions of equilibrium of floating bodies, Meta-Centre and Metacentric height, Experimental and Analytical determination of metacentric height.

Relative Equilibrium—Fluid masses subjected to horizontal and vertical accelerations and uniform rotations.

4. *Hydrokinematics*—Types of flows—Steady and Unsteady, Uniform and Non-Uniforms, Stream lines, Path lines, Streak lines and Stream tubes, Principles of conservation of mass—Equation of continuity, Acceleration of Fluid particles—Local and convective, Rotational and Irrotational motions, Free and forced vortex. Circulation and Vorticity, Velocity potential and stream function, Elementary treatment of Flow-net.

Eulers' Equations of motion and integration of Eulers' equations, Energy equation for compressible and incompressible fluids—Bernoulli's equation, Assumptions in Bernoulli's equation, Energy correction factor.

5. *Applications of Bernoulli's Equation* : Pressure distribution in irrotational flow, pitot tube, currentmeter, Venturimeter, Orificemeter, Orifices and Mouthpieces, Submerged orifices, Large orifices, Time of emptying tanks by orifices.

Rectangular, Triangular and Trapezoidal notches, Francis formula, Velocity of approach, End contractions, Cippoletti weir, Broad crested weir, Submerged Weir, Modular limits, Time of emptying reservoirs by weirs.

6. Momentum equation and its application : Development of momentum equation by control volume concept, Momentum correction factors, Applications. Borda's mouth-piece, Sudden enlargement of flow, Pressure on flat plates, Nozzles.

7. *Flow in pipes* : Laminar flow, Reynolds experiment, Relation between shear and pressure gradient, Hagen—Poiseuille equation, Flow through parallel pipes and Stokes law, Transition from laminar to turbulent flow. Pipes in series.

Turbulent flow-Laws of fluid friction, Loss of head due to friction and other causes. Hydraulic gradient, Total energy line, Chezy's, Darcy's and Manning's formulae, Flow through branched pipes, Flow along a bye-pass, Power transmission through pipes, Conditions for maximum power.

8. *Flow in open channels* : Uniform steady flow, Chezy's, Kutter's, Manning's and Bazin's formulae, Economic sections for rectangular, circular and trapezoidal channels.

9. *Reciprocating pumps* : Constructional features and working. Slip, Coefficient of discharge. Acceleration head. Effect of friction in suction and delivery pipes. Air vessels, work saved by fitting an air vessel. Pump duty.

## 5. a INSTRUMENTATION (ELECTIVE)

1. Electronic Instruments : various types of vacuum tube voltmeters, Electrometers, value wattmeter, phasemeter, Harmonic Analyzer, Lamp Photometry.

2. Recording Instruments : Cathode Ray Oscilloscope, Galvanometer type oscillograph, oscilloscope cameras, circular and strip chart recorders, Magnetic tape recorders.

3. Transducers : Primary sensors, voltage and current generating Analogue Transducers, variable parameter Analogue Transducers, Frequency Generating and Digital Transducers, Transducer selection factors.

4. Telemetry and Data Transmission —(a) Fundamentals of R.F. Telemetry systems, Methods of Telemetry coding and Modulation and their comparison, practical Applications.

(b) Basic principles of land line Telemetry, Examples of Land line. Telemetry systems.

## 5. a ELECTROMAGNETIC FIELD (ELECTIVE)

1. Electrostatics—Coulombs Law, Electric Field Intensity, Electric Flux density, Electrostatic Potential, Gauss's Law, Principle of Superposition of fields and potential Boundary relations at a conductor surface, Laplaces and Poissons Equation. Dielectrics, Polarization, Boundary relations on a dielectric, Capacitors and calculation of capacitances, Energy stored in Electric field, Elementary ideas about solution of two dimensional field problems.

2. Steady Magnetic field—Magnetic Flux; Magnetic Flux Densi B, Magnetic Intensity H, Magnetomotive Force, permeability, Magnetisation M, Energy stored in a magnetic field, Ampere's Law for a current element, Magnetic field of simple circuit, Magnetic vector Potential, Analogies between Electric and Magnetic fields.

3. Maxwells Equations—Ampere's Law in differential Vector form, Ampere's Law for time varying fields, Faraday's Law in vector form, Field Equations in vector and integral form, conditions at boundary surface.

4. Electromagnetic Waves—Wave equation for free space conditions, uniform plane wave propagation, wave equation for conducting medium conductors, and dielectrics, Depth of penetration, Relaxation time Impedance of conducting medium Poynting's Theorem.

## II Second Term

### 1. (b) Mathematics IX (E)

#### *Statistics and Probability*

Frequency distributions, mean, standard deviation, definition and empirical measure of probability, expected value, Theoretical probability distributions. Binomial, Normal and Poisson's distributions.

#### *Group Theory :*

Concept of a group. properties of groups, sub-groups. Lagrange's theorem on the order of sub-group, Isomorphism and automorphism, Permutation group, Cayley's theorem on isomorphism in groups, Cyclic group.

#### *Boolean Algebra :*

Principle of duality, Boolean functions, Binary Boolean algebra, Applications to Electrical network.

*Complex variables :*

Analytic functions, Cauchy-Riemann conditions, Cauchy's integral theorems, elementary contour integration, elements of conformal mapping.

*Rigid Dynamics :*

Moments and products of inertia, D'Alembert's principle motion about a fixed axis, simple cases of motion in two dimensions, Lagrange's equations for finite forces.

## 2. b. ELECTRICAL MACHINE DESIGN

Basic principles of Electrical Machine design. Output coefficient. Specific loadings. Specifications Types of Insulating Materials. Temperature rise in machines for continuous and intermittent ratings. Heat dissipation. Methods of ventilation and cooling Magnetic materials and allowable flux densities. Calculation of magnetic circuits. Real and apparent density. Tapered teeth. Carter's coefficient for salient poles. Magnetising current Leakage fluxes and reactances. Magnetic pull.

Open and closed circuit armature windings. Single layer and double layer windings. Fractional slot windings. Calculation of forces between current carrying conductors. Application of the above design principles to D.C. Machines, transformers, Induction Motors and Synchronous Machines.

## 3. b. OPERATION AND CONTROL OF POWER

Causes of dangerous currents, their effects, Classification of reactances of Synchronous Machines. Current limiting reactors; types, construction, methods of location and calculation.

Causes of pressure rises, protection against them, Coordination of system insulation.

Neutral earthing, types, methods, advantages and disadvantages.

Relays : General consideration, construction of electromagnetic attraction and induction types, concept of reset, pickup, inverse time and definite time characteristics, Over-current, overvoltage, directional distance and differential relays. Phase and Amplitude comparators, Development of

Static Relays. Protection of alternators, transformers; transmission lines, bus bars and prime movers.

Circuit breakers, Theory of current interruption, energy balance and recovery rate theory, arc quenching, Rating of circuit breakers, types, principles of operation; testing and selection of circuit breakers.

## 4 b WATER POWER ENGINEERING

### 1. *Water Power Engineering :*

Elements of hydrology, Stream flow data, precipitation Types—Measurement—Average depth over area—Disposal of precipitation—Evaporation and Transpiration—Infiltration—Surface runoff. Mass curves, Hydrograph, Flow duration curves. Pondage and Storage. Estimation of available power. Elementary information regarding dams, spillways, power channels and tunnels, balancing reservoirs, surge tanks, forebays, penstocks. Economic diameter of penstock pipe. Types of hydro power plants.

### 2. *Impact of free jets :*

Impact of a jet on a flat and a curved vane both held stationary as well as moving, Flow over radial vanes, Jet propulsion of small ships.

### 3. *Water Turbines :*

Classification of turbines, Pelton Wheel, Francis, turbine, Propeller turbine—Kaplan turbine Main components, Work done and efficiencies, Working proportions, and Hydraulic design of above noted turbines, Draft tubes, Functions, Types and Efficiency of draft tube, Governing of turbines, Oil pressure governor, Pressure regulation, Surge tanks.

Performance of turbines—Unit and specific quantities, Specific speed, Characteristic curves, Model testing of turbines, Cavitation, Selection of turbines.

### 4. *Centrifugal pumps :*

Types of centrifugal pump, Working principle and work done by the impeller, Heads of efficiencies, Description of single stage and multistage pumps, Specific speed, Model tests, Pumps in series and pumps in parallel, Characteristic curves, priming devices.

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## 5 b I COMMUNICATION ENGINEERING (ELECTIVE)

1. *Transmission Lines* : Basic line equations and their solutions Equivalent network for transmission line, Distortion less line basic ideas about equalizers.

2. *Microphones and Loud Speakers* : Various types of Microphones, Telephone Receiver and Moving coil Loud-speaker.

3. Telephony : (A) Manual Telephony :

Transmission Bridges, Manual Exchange switchboard, subscribers Telephone circuit, subscribers line circuit and C.B. cord circuit, operators telephone circuit, Engaged test, junction working, repeater circuits.

(B) Automatic Telephony—Method of signalling, simple ten line system, Two Motion selector, 1000 and 10,000 line systems with common switching, Telephone Traffic Definitions, Other Automatic system.

(C) Elementary Ideas about multichannel system.

4. Telegraphy :—(A) Telegraph codes and distortion, various types of telegraph keys and relays, simple telegraph circuits.

(B) Elementary ideas about teleprinter.

(C) Elementary ideas about voice frequency telegraphy and picture telegraphy.

5. Transmission of information : Multichannel operation, Bandwidths used for various types of signals, sampling Theorem Rate of Transmission of Information.

6. Elementary ideas about Antennas and Radio Wave Propagation.

## 5 (b) ELECTRICAL ENGINEERING MATERIALS (ELECTIVE)

1. Introduction :

Basic idea of quantum mechanics; electron configuration of atoms; various types of bonds and atomic arrangements in solids.

2. Dielectric properties of Insulators.

Dielectric constant: Polarisation; atomic interpretation

of dielectric constant; internal field in solids and liquids some properties of ferro-electric materials; piezoelectricity. Frequency dependence of electronic polarisation; dielectric losses.

3. Elementary ideas on magnetic field; magnetic dipole moment; orbital magnetic dipole moment and angular momentum of two simple atomic models.

Classification of magnetic materials. Diamagnetism, paramagnetism, ferromagnetism and ferrimagnetic materials; Curie Weiss Law.

#### 4. Conductivity of Materials :

Relaxation time, collision time and mean free path; resistivity and electron scattering; heat developed; superconductivity.

5. Mechanism of conduction in Semiconductors. The chemical bond in Si and Ge, density carriers in intrinsic semiconductors. n-type and p-type semiconductors Hall effect and carrier density.

### Final B.E. (Elective)

#### First Term

##### 1. a Control System :

Open and closed loop systems. Block diagrams. Terminology. Examples of simple Electrical, Mechanical, Hydraulic and thermal control systems and their differential Equations.

Transfer Function. Simple Block diagram reductions. Basic Principles of operation and Transfer function of Potentiometers, Synchros, Rotating Amplifiers, A.C. and D.C. Servomotors and Tachometers. Lag-lead networks.

Time Response of second order system for step, ramp and parabolic inputs, types of Feedback Systems. Error Coefficients and their use.

Frequency response. Polar plots, Bode Plots, Routh and Nyquist Criteria, of Stability. Gain and phase margin. Introduction to root locus technique. Elementary ideas of compensating techniques.

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## 2. a ELECTRICAL MACHINERY IV

Action of Commutator in A.C. Machines, Function of Brushes, Concept of phase Advancing. Voltage injections and continuous speed control.

Principle of operation of series, shunt and Scherblus Equipment.

Schrage Machine : Construction. Principle of operation Phasor diagrams.

Single phase series motors: Plain and compensated type, Principle of operation, Phasor diagram, circle diagram comparison with D.C. Motor.

Single phase Repulsion Motor : Principle of operation, phasor diagram, Compensated repulsion motor, phasor diagram.

2. Constructional Features of Mercury Arc Rectifiers. Non-Linearity as the necessary Feature for Conversion-Current Voltage Relationship for polyphase converters, Phenomenon of over lap-Interphase Transformers-Voltage control. Transformer Connections, Inverted Operation-Back fire in converters. Thyatron, Ignitron and Metallic Rectifiers.

### 3. Cross Field Machines.

Basic principle of operation of Meladyne and Amplidyne Applications.

## 3. a ELECTRONICS II

1. Controlled Rectifiers—Thyatron Ignitron Silicon controlled rectifiers; control rectification; methods of triggering thyatron and silicon controlled rectifiers. Voltage stabilizers.

2. Oscillators—Analysis of basic vacuum tube and transistor inductances capacitance and resistance capacitance oscillators, crystaloscillators.

3. Pulse Wave generators : Operation of vacuum tube and transistor multivibrators free running; monostable and bistable. Blocking oscillator type vacuum tube saw tooth generator; multivibrators saw tooth generator and thyatron saw tooth generator.



4. Modulation—Basic ideas about amplitude, frequency and phase modulation. Basic ideas about square law and linear amplitude modulation circuits using vacuum tubes.

5. Demodulation : Basic vacuum tube amplitude modulated detectors. Basic ideas about superhetrodyne receiver.

6. Special types of small signal amplifiers : D.C. amplifiers, problem of drift in deamplifiers, Differential or difference amplifiers : Operational amplifier elementary idea about analogue computation.

7. Electronic Devices : Principles of operation of H.F. Triodes : Klystrons : Magnetrons; Travelling-wave tubes; Tunnel Diodes-parametric Diodes-Zener Diodes.

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#### 4. (a) ELECTIVE PAPER : III INDUSTRIAL ENGINEERING

Business Organisation : Types partnership and Joint Stock Companies, their formation and working different kinds of shares and debentures. Financial statements-Balance sheet and Profit and Loss Accounts. Co-operative organisations and state enterprises.

Industrial Management; Scientific management. Types of organisation, organisation charts, essentials of a good organisation.

Production planning & Control : Planning, routing, Scheduling, dispatching and follow up. Job and mass production, Inspection Department and its duties. Organisation, stages of inspection, introduction to statistical quality control.

Stores Organization : Functions of the stores department, material requisition, store records.

Industrial Economics : Prime and overhead cost. Principles of allocations of overhead cost. Different methods of depreciation, standard cost and variances, relative worth of alternatives.

Personnel Management : Selection, placement and training of technical personnel, division and specialisation of labour welfare activities. Working conditions. Accident and safety protections, Trade Union & Work committees.

Wage payment : Types—Time and piece rate system. Various incentive schemes, profit sharing and co-partnership, time and motion study, Merit rating, Job evaluation.

Factory Location & Plant Layout : Factory's selection of site as to suitability, of land service and Local Self Government relations, Materials, labour market and communication. Classification of manufacturing. Plant principle of plant layout, Material handling equipment. Factory buildings and service.

Industrial Laws : Indian Factories Act, Payment of Wages Act, Workmen's Compensation Act, Trade Union Act, Industrial Dispute Act. Employees State Insurance Act, Strikes and Lock-outs, their prevention and settlement. Indian boiler Act.

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#### 4. (a) MODERN PHYSICS (ELECTIVE)

##### 1. Nuclear Atom and elements of spectroscopys :

Elements of spectroscopy, Evidence for a Nuclear Atom, Bohrs Theory.

2. Electronic structure of Atoms—The wave nature of the electron, complex atoms and the periodic system, excitation and ionization.

3. X Rays : Generation, Characteristics and application of X rays.

4. Elementary Quantum Mechanics—The Schrodinger Equation Free Electrons, Quantum tunneling, Hydrogen atom.

5. Free Electron Theory of Metals : Interatomic forces, The electron gas, free electron theory of metals, Applications of free electron theory.

6. The Band Theory of solids : Concept of energy bands, conduction according to band theory, Intrinsic and impurity semiconductors, The effect of an Electric Field, Lifetime and recombinations, the measurement of parameters.

7. Isotopes and Natural Radioactivity—Isotopes, Natural Radioactivity, Radioactive series, separation of radioactive deposits, uses of radioactive materials.

8. The Theories of Alpha, Beta and Gamma Emission: Nuclear structure, Alpha Emission, Beta Emission, Gamma Emission.

9. The Interaction of Nuclear Particles with matter : Alpha particles, Beta particles, Gamma Rays, Neutrons, Artificial Radioactivity, Accelerators.

10. Sources of Nuclear Energy : Nuclear Fission, Nuclear Reactors, Nuclear Fusion.

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## II Second Term

### 1. b. UTILIZATION OF ELECTRIC POWER

#### A. *Generation :*

Costs of various types of stations Maximum demand, load factor diversity factor, capacity factor and their influence on economic operation of stations.

System of tariffs-Power factor improvement.

Economic loading-Incremental rate curves-Reserve capacity of stations Interconnection of stations.

Excitation systems-voltage regulators and automatic voltage regulation.

#### B. *Utilization :*

Electric Heating : Elementary calculations of space heating-

Resistance, Induction and Dielectric Heating-Electric furnace-Electric welding.

Illumination :

Electric light sources : incandescent and electric discharge lamps-simple lighting calculations-Street lighting workshop lighting.

### Electric Drives :

Choice of motors based on electrical and mechanical characteristics and choice for domestic and industrial drives. Rating and service capacity.

### Electric Traction.

Systems of electric traction.

Mechanics of train movement speed time and speed distance curves-specific energy consumption.

Traction Motors-Comparison of characteristics of D.C. and A.C. Motors. Transmissions of drive-starting and speed control of motors used in traction methods of braking. Methods of supplying power, feeding and distributing systems. Introduction to controllers used in electric traction.

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## 2. b ELECTRICAL MACHINES V

Circuit representation of a two winding and three winding transformer. The idealised machine. M.M.F. and Flux distribution. Effect of saturation, harmonics and leakage.

Matrix notation. Linear transformation. Invariance of power. Three phase to two phase transformations. Transformations from two phase and three phase to symmetrical components. Transformation from rotating axes to stationary axes, Application of matrix techniques to routine performance calculations.

Matrix equations or d.c. and single phase commutator motors induction machine and synchronous machine. Torque expressions.

Steady state performance of two phase induction machine, two phase synchronous machines (cylindrical rotor and salient pole). Unbalanced operation of two phase induction machine.

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### 3. b INDUSTRIAL ELECTRONICS

1. Wave shaphing circuits : Integration and differentiation By RC and RL circuits : Clippers and Limiters; Clamping circuits.

2. Switching circuits—Basic ideas about switching; transistor as switch; Principle of frequency division by synchronization; Binary counter; Decade counter Basic diode gate circuits; Elementary idea about digital computer.

3. Relays and Timers : D.C. Operated and A.C. Operated time delay relays; Basic ideas about measurement of time and frequency.

4. Industrial Applications :

(i) D.C. Motor speed control : Thyration supply for D.C. Motor, speed regulation by armature voltage control : principle of IR drop compensation; Tachometer generator speed control.

(ii) Resistance Welding : Ignitron contactor for resistance welding; synchronous control circuit, follow up control (or trailing tube) circuit; sequence of functions

(iii) Generator e.m.f. control : Basic circuit of a generator voltage regulator; Analysis of regulator performance.

(iv) Photo Electric Devices : Basic photo cell relays : Photo-electric smoke detector.

(v) Metal Detector circuits : Conveyor belt metal detector; Electronic metal detector.

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### 4. b. POWER PLANT ENGINEERING

Selection of site for steam power plants—general layout of buildings, plant and accessories. Supply storage and handling of fuels, Ashhandling. Instrumentation associated with steam power plant. Commissioning and testing of boilers. Modern developments in steam power plants.

General layout of a Nuclear powerplant. Types of fuel, fuel cycles. Methods of cooling reactors. Moderator and methods of control. Safety measures. Economics of nuclear power stations.

Electrical Auxilliaries of a Power station. Commissioning and testing of: turbo alternators, Water-wheel alternators, Power Transformers, Bulk-oil circuit breakers and air-blast-circuit breakers.

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#### 4. b. NUCLEAR ENGINEERING (ELECTIVE)

##### 1. Neutrons, Fission And The Chain Reaction:—

General properties of neutrons, Neutron temperature, Cross sections for neutron-nucleus interactions Neutron flux, Cross section, and mean free path, Energy losses on collision, slowing down and thermal diffusion lengths, Uranium fission, the theory of fission.

2. Nuclear Reactor Principles:—Reactor classification, The multiplication factor, Criticality calculations, Neutron flux and power, Heterogeneous reactors, Conversion ratio.

3. Reactor Concepts:— Transient reactor behaviour, Effect of delayed neutrons, start up, subcritical operation, Reactor shutdown, Effect of temperature on operation, safety practices.

4. Materials of Reactor Construction: Fuel and fertile materials, Moderators, Coolants, Structural materials, High temperature materials. Induced radioactivity, Thermal Stress and thermal creep: Radiation damage.

5. Reactor Design Calculations:—Choice of purpose type and general features, Moderator and fuel cross sections and neutrons per absorptions, Thermal Utilisation, Resonance escape probability Fast fission factor and Critical size and choice of actual size, corrections for gas coolant voids and temperature, Heat removal and temperature analysis, Pumping power. Fuel cycle evaluation.

6. Radiation Hazard and Shielding :—The principles of health physics, Maximum permissible external dosage, Internal exposure, calculation of maximum permissible concentrations, Reactor radioactivity, Waste disposal, The shielding problem, sources of radiation, Inverse square spreading and attenuation, Fast neutron shielding, Heat generation in shields.

7. Detectors and Control Instruments:— Types of detectors, Electronic Equipment, start up control and safety systems, Reactor control and perturbations.

8. Electrical Power Generation :—Basic fuel and energy Costs, Construction and operating costs, Nuclear energy

resources, conversion and breeding, Direct conversion of heat to electric power.

9. Fusion :—Possible nuclear reactions, Thermonuclear machines, Fusion Reactors.

*Geology and Mineralogy*

Nature of minerals, detailed study of minerals with respect to their physical and optical properties, mode of occurrence, association and alterations.

The occurrence and commercial uses of metallic and non-metallic minerals Mineral fuels, ore deposits of India. Importance of minerals in National Economy. National Mineral Policy, Geographical and political factors in mineral uses and in price structures. Features peculiar to mineral economics, economic factors common to mineral and manufacturing industries. Demand, supply, productivity and marketing. Impact of atomic energy on conventional fuels Economics of important minerals and metals.

The above study will be Oriented the context of mineral beneficiation programme.

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III B.E. (Met.)

I First Term

*Introduction of Process Matallurgy:*

Economic importance of metallurgical industries. Location of principal ore bodies and extraction plants. Indian mineral resources and metallurgical industries.

Preparation of ores for smelting. Roasting, reduction and matte smelting, coverting, refining and electrolysis. Simplified flow sheets for the production of iron and steel, copper, aluminium, lead and zinc.

Indian resources. Comparative study of solid, liquid and gaseous fuels. Constitution of coal, Washing coal Combustion of coal. Carbonization. Coking industries. Metallurgical coke. Testing & Fuels. Fuel economy. Production of water gas and producer gas.

Principal acid, basic and neutral refractories, their composition and important properties. Insulation and other special refractories. Manufacture and testing of important refractory materials.

Selection of refractories for the furnace construction with special reference to Indian Metallurgical Industries.

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## 2. a. ELECTRICAL ENGINEERING

1. D.C. Machines:—Construction. E.M.F. Equation and torques equation. Characteristics of series, shunt and compound machine and their applications, Description of starter.
2. Rectification:—Mercury arc rectifiers, Principles of operation, basic idea of grid control.
3. Transformers:—Construction of single phase and three phase transformess, e.f.f. equation, losses and efficiency calculations uses.
4. Induction Motor:—Rotating magnetic fields, Construction of slip ring and squirrel cage induction motor, slip, Description of starters.
5. Synchronous Machines:—Construction, frequency synchoronising, starting, uses of synchronous motors.
6. Distribution and House wiring:—A.C. single phase and 2 phase 4 wire distribution types of House wiring, Earth connection.
7. Electronics:—Polyphase rectifiers, Principles of voltage stablizers. Feed back in amplifiers and simple equivalent circuits. Distorsion in amplifiers. Photocells and their uses. Brief idea of silicon controlled rectifiers.

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## 3. a. METALLURGICAL THERMODYNAMICS & KINETICS:

Thermodynamic system, the state of a system and its transformations. Isothermal and adiabatic expansion of a perfect gas. Forms of energy. First law of thermodynamics, change in internal energy, enthalpy, heat capacities, heat of



reaction, heat of formation, Hess's law, Kirchhoff's law. Carnot cycle, second law of thermodynamics, thermodynamic absolute temperature scale, reversible and irreversible processes, criteria for equilibrium. Entropy, statistical significance of entropy, variation of entropy with temperature, entropy change associated with phase change, entropy of mixing; Helmholtz and Gibb's free energies; Gibb's Helmholtz equation; Clausius Clapeyron equation, Maxwell equations, Third law of thermodynamics.

Fugacity, activity, equilibrium constant, temperature dependence of equilibrium constant. Thermodynamics of electro-chemical cells.

Partial Metal properties, chemical potential, Gibb's Duhem equation, ideal solutions, Raoult's law, Henry's law Sievert's law activity co-efficients, non-ideal solutions, regular solutions, excess thermodynamic functions, determination of activity.

The derivation of Gibb's phase rule. the use of free energy concentration diagrams in establishing simple phase diagrams.

Study of Ellingham diagrams for the formation of oxides, sulphides and chlorides and their applications in metallurgy.

Order of reaction and molecularity, kinetic theory of chemical reaction; activation energy, theory of absolute reaction rates. Determination of the order of reactions.

#### *4a Geology and Mineralogy*

Nature of minerals, detailed study of minerals with respect to their physical and optical properties, mode of occurrence, association and alterations.

The occurrence and commercial uses of metallic and non-metallic minerals. Mineral fuels, ore deposits of India. Importance of minerals in National Economy. National Mineral Policy, Geographical and political factors in mineral uses and in price structures. Features peculiar to mineral economics, economic factors common to mineral and manufacturing industries. Demand, supply, productivity and marketing. Impact of atomic energy on conventional fuels. Economics of important minerals and metals.

The above study will be oriented in the content on mineral beneficiation programme.

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## II Second Term

### 1. b, INTRODUCTION TO PHYSICAL METALLURGY

Solidification of pure metals and alloys; Chilled, Columnar and equiaxial crystals, dendritic growth, imperfections; normal, inverse and gravity segregation and coring.

Phase rule, binary equilibrium systems; isomorphous, eutectic, peritectic monotectic etc. Order disorder transformational Study of phase diagrams, metallography and properties of commercially important alloy systems viz Cu-Zn, Cu-Sn, Cu-Ni, Cu-Al, Pb-Sn, Al-Cu, Al-Si etc.

Detailed study of iron carbon equilibrium diagram, effect of alloying elements.

Basic principles of heat-treatment; annealing, normalizing, hardening and tempering. T.T.T. curve, hardenability; factors affecting.

Metallurgical microscope; principle, defects, chromatic and spherical aberrations etc. types of microscopy; dark and bright field illumination, oblique illumination, polarized light etc.

Methods of detection of phase changes and construction of equilibrium diagrams. Resistivity measurements, dilatometry, cooling and heating curves, specific heat measurements.

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### 2, b. MATHEMATICS-VII (Met)

#### *Differetnial requation :*

Differential equations of second order with variable coefficients, Partial differential equations of first and second order.

#### *Vactor calculus*

Vactor and scalar point functions, gradient, curl and divergence, line, surfact and volume integrals, Gauss's, Stokes' and Green's theorem.

*Complex variables*

Analytic functions, Cauchy-riemann conditions, Cauchy's integral theorems, elementary conformal mapping.

*Laplace Transforms*

Laplace Transforms, elementary rules, applications to solution of second order differential equations with constant coefficients.

*Numerical analysis*

Numerical integration and differentiation, Euler, Piccard, Runge-Kutta methods of solving differential equations of first order.

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### 3. b. METALLURGICAL & INSTRUMENTAL ANALYSIS:

Methods of sampling of ores, metals and alloys and other metallurgical products.

Specific methods of detection Cr, Ni, Cu, Pb, Zn, Al Mn and W in ferrous and alloys. Spot tests.

Quantitative analysis of Iron and Steel, Alloy steels, nonferrous metals and alloys, ores and slags. gaseous fuels. Proximate and ultimate analysis of coal. Analysis of liquid.

Fire—assay of precious metals.

*Instrumental:* Importance of instrumental analysis in comparison with chemical analysis. Fundamental physico-chemical principles involved and equipment required in such analysis viz. colorimetry, absorptiometry, spectroscopy potentiometry, amperometric titration, Coulometric titration, Polarography, Conductometry, electro-analysis and Flame photometry.

X-rays and electron-probe micro-analyser as means of chemical analysis.

Errors of observation and accuracy of measurements.

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## 1. b ELEMENTS OF MATERIAL SCIENCE

Materials in Engineering : Metals & alloys, ceramics, polymers, whiskers, composite materials.

Engineering requirements of materials 'mechanical, physical and chemical properties, their definition, units and examples. Internal structure of materials : electronic configuration of atoms types of bonding in solids, crystal structures microstructures. Structural disorder : Imperfections in crystals, thermal disorder point defects, dislocations, boundaries, amorphous solids.

Molecular phases : Molecular solids, linear polymerization, molecular weights, molecular lengths, crystallization of polymers, molecular variation, unsaturated polymers, cross linking, frame work structures.

Solid solutions, order disorder transition, defects structures. Atom movements, diffusion in compound, diffusion in polymers.

Multiphase materials : Phase equilibria, phase changes in materials, multiphase microstructures.

Strengthening processes in solids.

Modern materials : High temperature alloys, ceramics, cements, ceramic coated materials, Fibres, composite materials, reinforced materials.

Fourth B.E. (Met.)

I First Term

### 1. a. FERROUS EXTRACTIVE METALLURGY:

Brief history of iron and steelmaking. Review of thermodynamic basis of iron and steelmaking. Raw materials for iron and steel-making. Preparation of iron ores and blast furnace burden with possible effect on operation. Blast furnace fuel and refractories Factors effecting fuel consumption.

Production of pig iron in the blast furnace. Plant layout and operation. Blast furnace slag with special reference to the effect of alumina. Blast furnace operation including their irregularities, their prevention and correction. Blast furnace gas cleaning, hot blast stoves and pig casting machines. Recent trends in blast furnace practice. Alternative

methods of iron production. Production of wrought iron and ferroalloys.

Steelmaking by the acid and basic Bessemer process and side blown converter. Acid and basic open-hearth practice. Electric arc and Induction practice. Duplexing and active mixer practice. Ladle desiliconisation. Refractories used in steelmaking. Development of the pneumatic processes and use of oxygen in steelmaking. Recent development in iron and steelmaking.

Ingot defects and control. Deoxidation of steel. Continuous casting and vacuum treatment of steel.

Economics of iron and steelmaking.

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## 2a—HEAT TREATMENT AND PHYSICAL METALLURGY :

Solid state-transformations in Fe-C system.

Transformation to austenite, factors affecting grain size. Importance of austenitic grain size and its determination. Kinetics of transformation of austenite to pearlite, bainite and martensite. Distribution of alloying elements in steel and their effect on phase transformation characteristics.

Important heat treatment processes such as martempering, austempering, ausforming and maraging. Different variables affecting heat treatment processes—Heat treatment of cast irons, steels and alloy steels.

Induction and flame hardening, Carburizing, Nitriding and Carbonitriding of steels. Furnaces used for heat treatment operations atmosphere control in heat treatment furnaces Quenching media.

Heat treatment of nonferrous alloys :

Kinetics and mechanisms of precipitation hardening. Changes in properties accompanying precipitation hardening. Important precipitation hardenable alloys. Solid solution hardening, dispersion hardening.

Introduction to ternary equilibrium diagrams.

### 3a—MINERAL DRESSING :

Introduction : scope, objects and limitations of mineral dressing.

Communication and Liberation :law of crushing. Theory and practice of crushing and grinding. Conventional units used for communiton, their fields of application and limitation.

Sizing and classification : Laboratory methods of sizing and interpretation of sizing data. Industrial methods of sizing and various types of screens used. Laws of settling of solids in fluids, types of classifiers, classification as a means of sizing and concentration.

Concentration. Gravity concentration methods including jigs, spirals, shaking tables and heavy media separation, applications and limitations of each methods. Froth flotation and physico-chemical principles involved therein, chemistry of flotation reagents, flotation machines and flotation of simple sulphide and oxide ores. Electro-static and electromagnetic methods of concentration. Amalgamation techniques of concentration.

Dewatering and Drying. Theory and practice of thickening and filtration.

Coal washing : Washability curves, crushing, screening and cleaning of coal by gravity and flotation methods. Drying of coal.

*Simplified flowsheets for the beneficiation of coal, simple ores of copper, lead, zinc, iron and managanese and beach sands with reference to Indian conditions.*

### 4 a—NONFERROUS METALLURGY.

Review of the theoritical basis of extraction and refining. Extraction, and refining of aluminium, copper, lead, zinc, cadmium. antimony, magnesium, titanium, nickel, tin, silver and gold. Recent developments, present practice and future possibilities of nonferrous metallurgical industry in India. Recovery of metal values from metallurgical wastes, such as nonferrous slag, dross, fuel gases etc.

Special methods of production of high purity metals, zone refining, ion-exchange, solvent-extraction, liquid-metal extraction thermal-decomposition methods.

### 5a—SCIENCE OF METALS : (Elective)

Structure of the atom. Quantum numbers, electronic configuration of elements and its influence on their properties.

Basic properties of the nucleus, nuclear forces, general features of nuclear reactions, natural radioactivity, artificial transmutations.

Review of kinetic theory of gases, statistical mechanics, electron theory of metals. Para and diamagnetism.

X-rays—properties and production, continuous and characteristic spectra, absorption of x-rays, filters, scattering and diffraction. Principles underlying power, rotating crystal and large method used in x-ray metallorgraphy.

Diffusion :—mass transport in solids, Fick's law, Kirkendall effect. Mechanisms of diffusion.

Thermodynamics of alloying, free energy—composition diagrams.

Basic concepts of the theory of dislocation.

### 5.a—SMALL SCALE INDUSTRIES (Elective)

Growth of small scale industries in India. Role of small industries in developing economy. Assistance programme for small industries, technical assistance, credit facilities hire-purchase of a machinery. Organisational set up. Industrial estates, ancillary industries, rural industrialisation and growth centres.

Government stores purchase programmes, marketing assistance and export promotion.

Modernization of small scale industries, standardisation and quality control, employment potential of small industries.

Important small industries in India in the context of their distribution in different states.

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## 5.a—MATERIAL SCIENCE : (Elective)

Introductory principles. Materials and properties. Structure and energies of atoms. Atomic bonding and co-ordination. Structure of solid phases. Crystalline phases. Crystal geometry. Solid solutions. Atomic processes in solids. Atom movements. Elastic behaviour of solids. Plastic deformation. Viscoelastic deformation. Semiconduction in solids. Magnetic behaviour of solids. Multiphase materials. Phase equilibria. Phase changes in materials. Multiphase microstructures. Strengthening processes.

### *Modern materials :*

Ceramic materials : Ferroelectric materials, glass for nuclear applications, flame sprayed ceramic coated materials, borides.

Organic materials : High temperature plastics, synthetic rubber. Thermosetting and thermo plastic resins.

Concrete, whiskers. Composite materials, Semiconductors, superconductors.

## II—Second Term

### 1.b.ADVANCE METALLURGICAL THERMODYNAMICS

Statistical thermodynamics concept of entropy.

Quasi-chemical approach to ideal, regular and non-regular solutions.

Absolute reaction rate theory.

Application of physical chemistry to the following aspects of metallurgical engineering :

Production of iron and steel.

Extraction of non-ferrous metals.

Changes of state (evaporation of metals etc.)

Absorption of gases in liquid metals.

Nucleation and growth transformation, order-disorder transformation.

and

Martensitic transformation in steels.



## 2 b—MECHANICAL METALLURGY—I

Plastic deformation of single and polycrystalline aggregates. Slip and twinning. Hot and Cold working. Annealing after cold working, recovery, recrystallization and grain growth. Yield point phenomenon and critical strength.

Types and properties of dislocation stress-field, partial and full dislocations, line tension, movement and multiplication of dislocations, theories of yielding, work hardening and strengthening, mechanisms, quench aging and strain aging.

Testing of metals, stress-strain diagrams, tensile properties and conditions of necking, hardness and torsion testing methods and precaution. Notch bar impact testing, Notch sensitivity. Transition temperature and temper embrittlement phenomenon. Ductility test.

Flow and fracture of metals, effect of strain rate composition structure, triaxiality of stress, temper theories and testing of creep, fatigue and fracture.

Significance of test results in engineering applications. Principles and limitations of Non-destructive testing.

Radiography-ultrasonic, magnetic, electrical and visual methods and their applications.

Systematic investigation of defects and failures in metals. Acceptance tests for wires, tubes, wheels, axles and rails. Spark testing of steels.

## 3 b—*Foundry Technology* :

Present status of foundry industry in India, its scope and development. Types of foundries. Moulding and core sands. Bolding materials. Mechanisms of bolding. Parting and facing materials. Special additives. Effects of variables on the properties of moulding and core sands. Testing of moulding sands.

Patterns : Functions and classification. Pattern materials. Pattern allowances.

Moulding Processes : Green and dry sand, core and loam moulding, Permanent mould, plaster, centrifugal, investment and die casting. Shell moulding and CO<sub>2</sub> process.

Solidification of castings : Flow of metals in moulds, principles of solidification of metals and alloys, directional solidification, coring and segregation.

Gases in metals and methods of degassification.

Gates and Risers : Principles of gating and risering, gate nomenclature and types of gates and risers.

Casting Defects : Defects due to incorrect moulding and core sands, type of melting furnaces, melting and pouring practice and casting design.

Cast Iron : Principles of smelting in coupla and other furnaces. Foundry characteristics of white cast iron, gray iron. S.G. iron, Malleable irons, and heavy duty cast iron. Melting, alloying and casting practice of Al-base and Ca-base alloys. Steel foundry practice.

Salvaging, finishing and inspection of castings.

#### 4 b—FURNACE TECHNOLOGY

Elements of heat transfer, steady state condition, condition convection and radiation, combined effects of heat transfer, heat losses in furnaces.

### II Second Term

Natural, induced, forced and balance draft, calculation of natural draft and regulation of primary, secondary and excess air.

Methods of waste heat recovery; recuperation, regeneration and waste heat boiler.

Furnace control and furnace atmosphere control.

Classification of furnaces. Movement of gases in furnaces. Compressed air and blast, characteristics of nozzels. Critical pressure ratio. Flow through furnace openings.

Design considerations for some metallurgical furnaces, including blast furnces, open-hearth and heat treatment furnaces.

Materials of construction, Electric heating elements. Design of burners. Construction and operation of melting, reheating and kiln type furnaces. Fuel economy and thermal efficiency of furnaces.

Testing of fuels used in various furnaces.

Principles of temperature measurement, thermocouples, resistance thermometers, total radiation and optical pyrometers. Construction, Calibration and operation of pyrometers.

### 5 b—EXPERIMENTAL TECHNIQUES (Elective)

Basic principles and experiments covering important areas in metallurgy such as vacuum melting and casting. Production and measurement of high and low temperatures. Special methods of casting. Levitation melting. Measurement of vapour pressure of metals. Vacuum fusion and special analytical techniques. Zone melting techniques. Production of single crystals. Measurement of electrode potentials. Measurement of magnetic properties. Use of radiation, radioactive substances. Electron and neutron diffraction. Electron micro-probe analysis.

### 5 b—STEEL FOUNDRY PRACTICE : (Elective)

Modern developments in moulding materials and processes in steel foundry practice. Special tests for moulding sands and foundry sand control.

General consideration affecting the design of steel castings. The comparison of various moulding processes and foundry defects attributed to bad design.

Basic design principles of directional solidification preventing hot spots and cored holes. Factors affecting the properties of steel casting. Special purpose steel castings, continuous casting.

Effect of dissolved gases, control of physical requirement and quality of steel castings. Theoretical considerations of gating and risering.

Melting furnaces used in steel foundry practice and modern melting techniques.

Method of salvaging and finishing of castings. Special metallurgical inspection methods.

Calculation and planning of mechanised steel foundry.

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## 5b—PHYSICAL METALLURGY OF NONFERROUS ALLOYS (Elective)

The course will include the study and critical appraisal of applications of copper, magnesium, aluminium, titanium, nickel, lead, zinc, tin and their alloys.

Physical properties, crystal structure, thermal, electrical and magnetic behaviour, phase diagrams of important alloying systems. Thermodynamics, kinetics, theories and mechanisms of heat treatment processes and metallography. Corrosion and oxidation characteristics-

Hot and cold working and heat treatment, recovery, recrystallization and grain growth, effect of temperature, alloying and impurities.

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*Final B.E. (Met.)*

### I—First Term

#### 1 a—*Metals in Industry :*

The above course should broadly cover the various metallurgical aspects of the uses of different metals and alloys. General characteristics of metallic materials. Typical applications of common engineering metals.

Cast iron and alloy cast irons. Steel and alloy steels. Non-ferrous metals and alloys, light metals and alloys. Alloys used because of ease of fabrication. Corrosion and heat resistant alloys. Alloys resistant to general wear and abrasion. Tool materials, bearing alloys. Alloys used because of special physical properties such as conductivity, resistivity, magnetic properties, machinability, low thermal expansion, fusibility etc.

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## 2a—APPLIED X-RAYS AND PHYSICS OF METALS.

Properties and production of X-rays, continuous and characteristic spectra, absorption of X-rays, filters, scattering and diffraction. Diffraction methods, viz., the Laue method, Powder method and the Rotating crystal method

Application of X-ray techniques : Precise lattice parameter determination, phase diagram determination, chemical analysis, stress measurement, grain size determination and detection of ordering.

Stereographic projection and its application. X-ray microscope.

Electron optics : Theory of electron diffraction and electron microscopy replica and thin film techniques. Metallurgical applications. Electron microprobe analyser.

Electron theory of solids : Classical, quantum and Brillouin zone theory of metals. Differences between metals, insulators and semiconductor. Electrical and thermal conductivity, ferromagnetism and cohesion.

The thermal behaviour of metals : The specific heat of crystals, change of free energy with temperature Polymorphism.

Diffusion of metals : Fick's Laws. Solution of diffusion, equations for simple cases. Kerkendall effect. Mechanisms of diffusion. Grain boundary diffusion.

Phase transformation order disorder transformation in alloys, theoretical basis of the disorder change. Long range order, short-range order, cluster ing and antiphase domains. Free energy composition diagrams. Radiation damage. Structure of liquid metals.

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### 3 a—INDUSTRIAL METALLURGY :

A brief survey of the principle minerals deposits of India, which are of interest to the metallurgical industries.

Forms of business organisation : Single enterprenuer, partnership, joint stock companies, cooperative societies and governmental concerns, company law.

The growth of the metallurgical industry and its present structure and organisation. Administration, management and industrial organisation. The function of administrative officers and managerial personnel. Centralisation and decentralisation.

Industrial finance. The general principles of banking and the function of banks. The stock exchange and money market. Control of currency, inflation and deflation.

Principles of book-keeping, balance sheets, trading accounts profit and loss accounts, costing, depreciation, amortisation, redundancy and obsolescence of plant equipment. Works costing, financial and budgetary control.

Plant location and layout with reference to metallurgical industries.

Production planning. Factors affecting plant and process efficiency and productivity. Time and motion study methods. Operational research.

Labour relations and personnel welfare, factory laws and safety precautions, wage negotiations, rate fixing and incentives. Industrial unrest.

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#### 4 a—METALLURGY OF LIGHTS.

( ELECTIVE )

Metallurgy of Aluminium, Magnesium, Beryllium, Titanium and Zirconium. Theory and practice of extraction and refining. Physical and mechanical properties of the metals and the alloys based on these metals and their uses. Fabrication and Foundry practice. Light metal industry in India, present position and future scope.

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#### 4 a—PRODUCTION OF FERRO-ALLOYS :

( ELECTIVE )

Introduction : Production and scope of ferro-alloys in India.

*Ferro Alloy Furnaces :*

Main structural features of furnace shell, refractories. Type of single phase and three phase furnaces.

*Mechanical Equipments :*

Electrode holder, cooling systems of electrode holder and furnace shell. Slipping and positioning mechanism of electrode. Burder charging system.

*Electrical Equipment :*

Furnace power supply circuit, star and delta connections, working voltage and current. Power factor and efficiency, furnace transformer, bus bars. Protective devices, circuit breakers and furnace control. Types of electrodes and their manufacture.

*Production of Ferro Alloys :*

Basic principles of production of ferro-alloys in blast furnace, arc furnace and metallo thermic process. Flux and fluxless techniques. Raw materials. burden calculation and operation of furnace. Production and physicochemical principles of smelting of Fe-Mn, Fe-Si, Si-Mn, Si-Ca, Fe-Cr, Fe-W, Fe-Ti, Fe-V, Fe-Mo, and Nitrided ferro alloys.

Irregularities in ferro alloy furnaces, their remedy and restarting of the furnace.

#### 4. a—ADVANCED FOUNDRY TECHNOLOGY : (Elective)

Modern developments in moulding materials and processes in foundry practice. Special tests for moulding sands and foundry sand control.

Mechanism of solidification in castings. Segregations and gases in castings. Heat transfer in various types of moulds, effects of corner and curved surfaces, cores, chills and other variables.

Measurement of physical properties of liquid metals. Structure and properties of metallic liquids. Recent trends in Cupola practice and special foundry practices.

Cleaning and inspection of castings. Special metallurgical inspection methods. Design considerations and modern foundry layout.

#### 4. a—POWDER METALLURGY (Elective)

Powders: Production of metal powders by mechanical and physico-chemical methods. Hazards in metal powder production characteristics of powders and their correlation with methods of production. Mechanical and thermal treatment of powders prior to compacting.

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**Compacting :** cold and hot pressing, characteristics of green compacts, powder rolling, extrusion of metal powders and effect of various factors on the properties of green and sintered compacts.

**Sintering:** Furnances and controlled atmospheres, factors affecting sintering, liquid-phase sintering and properties of sintered compacts.

Theories of sintering.

**Products :** Dense and porous materials, refractory materials, hard metals, electrical contacts, magnetic materials, friction parts and dispersion-strengthened materials.

## II Second Term

### 1. b—MECHANICAL METALLURGY-II

Introduction to mechanical working, Hot and Cold working, structure and property changes during hot and cold working of metals. Nature of stresses and strain and metal flow in various working operations.

Soaking pits and reheating furnaces descaling of steels, precautions in heating ferrous and non-ferrous metals.

Rolling of metals:

Rolling mills and accessories. Elements of roll pass design, rolling to blooms billets, slabs, rails, bars and sheets.

Forging :

Drop and press forging, forging equipments and defects, roll forging and rotary swaging.

Extrusion :

Types and variables in-extrusion, extrusion equipment and defects.

Miscellaneous working operations.

Wire drawing, tube drawing, welded tubes, manufacture of wheels, aneles, and crank shaft. Sheet metal working operation and explosive forming.

Powder Metallurgy :



Production of metal powders. Compacting and sintering. Applications of powder metallurgy.

Metal joining techniques : Welding, brazing, soldering.

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## 2.b—NUCLEAR REACTOR METALLURGY

Structure of the nucleus, binding energy, radioactivity, nuclear interactions and cross sections. Fission process, multiplication and criticality factors, neutron diffusion and slowing down process. Fusion reactions.

Reactor systems, research and power reactors, classification of reactors. Materials for nuclear reactors viz. fuels, moderators, control rods, coolants, reflectors and structural materials. The Indian reactors.

Occurrence of reactor minerals in India, processing of the minerals and production metallurgy of uranium, thorium, plutonium beryllium and zirconium with emphasis on basic chemistry of the processes. Production of reactor grade metals by the iodide process and zone refining. Treatment of Indian beach sands for uranium, thorium and zirconium with typical flowsheets. Production of enriched uranium. Properties of nuclear materials and fabrication. Fuel element technology. Effects of irradiation on fissile and nonfissile metals.

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## 3.b—ELECTROMETALLURGY AND CORROSION

Applied electro-chemistry, review of basic principles, theory of conduction, electrode potentials, electrochemical series, sign convention of electrode, double layer concept, liquid junction potentials, standard electrodes and application of e.m.f. measurements. Polarization and over-voltage. Streaming potential. Electrophoresis. Theory molten electrolytes.

Electro-deposition : Theory of single metal and alloy plating, factors influencing the nature of deposit. Plating of Cu, Ni, Cr, Ag, Zn and Cu-Zn and testing of electro deposits. Anodizing.

Electro winning of Cu, Zn, Cd and Mn.

Electro refining of Al, Cu, Pb, Ni, Sn, Ag and Au.

Corrosion : Direct chemical attack, electro-chemical corrosion and liquid metal corrosion. Intergranular and transgranular corrosion. Stress corrosion. Stress corrosion and its mechanism, corrosion fatigue. Inhibition and passivation of corrosion. Methods of prevention of corrosion.

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#### 4. b ADVANCED ALUMINIUM TECHNOLOGY

(Elective)

Survey of world resources and availability. Principle and methods of extraction and refining, melting and degassing. Properties and applications. Effect of alloying elements and impurities on properties. Alloys-cast and wrought-classification, properties and applications. Commercial forms of aluminium alloys. Hot and cold working. Work hardening, recovery and recrystallization. Metallurgy of heat treatment and precipitation hardening.

Joining and finishing methods. Anodizing. Corrosion and stress corrosion. Aluminium powders and paste.

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#### 4. b. METALLURGY OF COPPER AND ZINC (Elective)

Copper survey of world resources and availability.

Principles and methods of extraction and refining.

Grades of copper, properties and typical applications. Copper alloys-compositions, physical metallurgy, mechanical properties and applications. Foundry techniques and other shaping processes. Welding, brazing and soldering of copper and copper alloys. Copper and copper alloy plating. Surface treatments for copper and copper alloys. Copper in cast iron and steels.

Zinc survey of world resources and availability.

Principles and methods of extraction and refining. Properties and typical applications. Zinc alloys in Engineering and Technology. Galvanizing. Die casting.

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#### 4. b ADVANCED FERROUS METALLURGY (Elective)

Recent trends in the field of agglomeration of iron ores, gas solid and slag metal reactions in iron and steel making. Modern theories about slag structure. Thermochemical and Dynamic models of blast furnace.

Evaluation of efficiency of the different iron and steel making processes and modern developments in there spective areas. Changing pattern of steelmaking processes. Special steelmaking processes. Use of radioisotope and computer control in iron and steelmaking industry. Vacuum degasification and casting of steel continuous casting of steal.

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## ANNEXURE II

One Year Industry Oriented Post-graduate Diploma Course in Irrigation Engineering and Hydrology.

*I Scheme of Working and Examinations*

Particulars	Scheme of Examination		Scheme of working hours per week	
	Paper No. of	Marks	Lectures	Course Work Total
		Hours		
			Paper Course Total	work
(A) Academic Courses (20-24 weeks)				
1. Applied Mathematics	1	4	100	50
(a) Statistics				150
(b) Fluid Mechanics.	1	4	100	50
2. Design of Irrigation Structures I.	1	3	100	50
3. Hydrology I	1	3	100	50
4. Land-Water Management				
			3	1
			3	2
			3	1
			3	1
			4	

5. Elective (any one of the following)	1	3	100	50	150	3	1	4
(i) Design of Irrigation Structure II								
(ii) Hydrology II								
(iii) Elementary Water Resources Planning.								
6. Conference and Seminars	-	-	-	100	100	-	2	2
(B) Practical Departmental Training (10 to 12 weeks)								
7. Training Report				100	100			40 hrs./week
(C) College Project								
8. Project Report				250	250			40 hrs./week
			500	700	1200			

## II Detailed Syllabi

### 1. APPLIED MATHEMATICS (C)

#### (A) *Statistics* :

Statistical homogeneity in time and space, analysis. Frequency distributions : Classification, tabulation and graphical representation of statistical data. Normal poisson and Binomial distribution. Lognormal and extremal distribution. Various Statistical parameters.

Probability paper and Plotting of data. Curve fitting. Method of least squares.

Simple linear regression and correlation. Bivariate distribution.

#### (B) *Fluid Mechanics* :

Newtonian incompressible fluids. Rotational and Irrotational flow. Elements of potential theory, flow net. Application to ground water flow.

General equation of motion of a fluid. Euler's equations. Energy and Momentum equations. Continuity equations.

Fluid viscosity. Viscous flow. Turbulence. Eddy viscosity. Reynold's stresses. Elements of Boundary layer theory. Skin friction and pressure drag. Resistance to turbulent flow.

### 2. DESIGN OF HYDRAULIC STRUCTURES I

(A) Design of Gravity Dams—Forces and acting on a dam- uplift pressures, Earthquake forces, silt, Wave and Wind pressures, Stability requirements, Design Criteria, and Safety factors, Two dimensional analysis, distribution of normal and shear stresses, Principal stresses in dam section, Principal of trial load analysis for gravity dams. Control of cracking, Transverse and longitudinal joints. Galleries in dams, stresses around openings.

(B) Spillways--Design of different types of spillways--Energy dissipating devices below spillways--Design of stilling basins.

(C) Design of Embankment Dams—Criteria for safety and general requirements of foundations and materials.

Seepage through and beneath earth dams and its control. Stability of dams, Construction pore pressure and their influence, Stability under draw down and steady seepage conditions, Protection of upstream downstream slopes.

(D) Rockfill dams—Typical sections, Problems of design, Different types of membranes, Settlement of rockfill dams, Construction methods.

(E) Design of Weirs and barrages on permeable foundations.

(F) Design of canals—Kennedy and Lacey theories.

### 3. HYDROLOGY I:

Hydrology and its historical development.

Rainfall and its measurement. Raingages, various types. Network of Gages. Analysis of precipitation records. Interpolation of data. Average depth of rainfall over an area. Area-depth and Rainfall-time relationship. Probable maximum precipitation and standard project storm.

Measurement and estimation of evaporation from land and water surfaces. Reduction evaporation from land water surfaces. Reduction evaporation. Transpiration and its estimation. Evapotranspiration equations.

Infiltration. Factors affecting infiltration measurement. Infiltration indexes.

Runoff. Factors affecting runoff. Rational formula. Hydrograph analysis. Unit hydrograph and S curve hydrograph. Introduction to Instantaneous unit hydrograph.

Streamflow measurement. Various methods. Flood formulae.

Ground water and its movement, Confined and unconfined aquifers. Water balance equation.

Darcy's law and permeability measurements Hydraulics of radial flow to wells steady and unsteady flow. Ground water level fluctuations. Salinity of ground water.

Droughts and hydrology of arid and semi-arid regions.

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#### 4. LAND AND WATER MANAGEMENT

##### (A) *Modern Irrigation Methods :*

Evaluation of Irrigation Methods—Applications and Limitations. Findings from analysis of Irrigation systems in some Existing Projects. Corrugation and Furrow Irrigation. Border strip Irrigation sprinkling. The coordinated Irrigation System. Flush Flood spreading. Subirrigation. Water, Soil and other related problems. Land Levelling.

##### (B) *Irrigation Development :*

Basic Irrigation Development Problems. The Engineering-Socio Economic Interface in Irrigation Planning. Preliminary investigations for Irrigation Planning. Alternative Methods for surface Irrigation of Rice. Multiple cropping and system Design.

##### (C) *Infiltration of water into soil and drainage systems :*

Unsaturated flow in porous media. Moisture profiles during infiltration due to ponded water. Rain infiltration Tile and ditch drainage.

##### (D) *Soil Erosion :*

Sediment Transportation, Soil erodibility. Rain and flow erosivity. Much effect. Slope and length effect. Erosion equations. Gully erosion.

#### 5. (i) DESIGN OF HYDRAULIC STRUCTURES II

(A) Design of Arch Dams—Their characteristics, Forces on arch dams, criteria for safe design, simple trial load analysis for arch dams.

(B) Design of Buttress Dams—Types and their characteristics. Design of deck, transitions and buttresses, Unit colume theory for the disign of buttresses.

(C) Silt transportation theory—Tractive force theory, Einstein theory etc.

(D) Design of typical canal structures such as fall, Cross drainage works regulators, Canal transitions, canal off takes etc.

(E) Sediment exclusion and its principle, Design of siltexcluders and ejectors.



## 5. (ii) HYDROLOGY II

Geologic factors in ground water studies, hydrogeologic methods. Exploration of ground water. Various methods. Safe yield from an aquifer.

Artificial recharge of ground water.

Salt water intrusion in aquifers.

Groundwater in arid and semiarid regions. Desert Lakes. Lakes in hydrologic cycle.

Advanced problems in well hydrolics. Methods of images and its application. Multiple well systems.

Peak floods. Maximum probable flood. Standard project flood. Flood routing. Various methods of flood routing. Reservoir and river channel routing. Flood forecasting in rivers.

Instantaneous unit Hydrographs. Conceptual mathematical models. Time-area diagrams. Elements of stochastic hydrology.

Water quality characteristics of surface and ground water. Conditioning of water for selective uses. Desalination.

Introduction to hydrometeorology. Cloud seeding.

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## 5. (iii) ELEMENTARY WATER RESOURCES PLANNING

### *A. Planning for water Resource Development :*

Statement of objective. Data needed for planning. Projections for planning. Project Formulation. Project Anlysis. Some common pitfalls in project planning. Augmentation of water supplies. Multiple-purpose projects. Functional requirements in multiple-purpose projects. Compatibility of muliple-purpose uses.

### *(B) Economic Basis for Water Resources Analysis :*

Basic objectives and principles. Utility Function. Low Flow Augmentation. Cost-benefit analysis.

(C) *Flood Plain Management :*

The need for flood plain management. Floods and the flood potential. Elements of a flood plain management programme. Reservoir Planning and spillways.

(D) *Water Resources Systems :*

Elementary concepts of systems engineering in water resources. Linear and Dynamic Programming. Stochastic models. Statistical decision theory.

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## One year Industry oriented Postgraduate Diploma in Industrial Engineering &amp; Entrepreneurship

## I Scheme of Working and Examinations

Particulars	Scheme of Examination (At the end of the year)		Scheme of working Hours/week	
	Paper No. of Hrs. Marks	Paper Course Total work	Lecture Course Total work	
<i>(A) Academic Course : (20-25 weeks)</i>				
1. Mathematical Methods (Mech.)	1 3 100	50	150	3 3 6
2. Industrial Relations & Engineering	1 3 100	50	150	3 3 6
3. Production materials, processes & management	1 3 100	50	150	3 3 6
4. Elective paper (any one of the following)				
(i) Work Study )				
(ii) Tool Engineering )				
(iii) Material Handling )				
(iv) Marketing & Export Promotion )				
	1 3 100	50	150	3 3 6

5. Home paper on Systems Engineering & Design enterprise.

—	—	—	100	100	2	—	2
—	—	—	100	100	2	—	2
<hr/>							
			14	16	30	Hrs/week	
<hr/>							

6. Seminar or extension lectures

(B) In-Plant Training (10-12 week)

7. Training report

(C) College Project : (10-12 weeks)

8. Project Report

—	—	—	—	—	—	—	—
—	—	—	300	300	—	—	40
<hr/>							
4	—	400	800	1200			
<hr/>							

Grand Total

## II DETAILED SYLLABI

1. *Mathematical Methods:*

*Theoretical frequency distribution:* elementary concepts, Normal, binomial and Poisson distribution.

*Elementary sampling theory:* Large and small sample tests. Random sampling. Goodness of fit. Analysis of variance.

*Sampling and statistical inference:* Statistical quality control. Control charts and their applications to industrial quality control. Acceptance sampling

*Certainty and uncertainty models:* Waiting lime theory. Monte Carlo method. Inventory models. Profit maximization and cost minimization models.

*Operations research tools:* Game theory, queneing theory. Graphical risks analysis. Linear and non linear programming methods.

*Electronic data processing:* Business machines. Punch card and punch tape systems. Elementary concepts of analog and digital computors. Application. Review of computer languages.

*Fortran programming:* Matrix operation. Elements of Fortran language. Programme preliminaries. Format specifications. Fortran compilation. Function statements Errors and mistakes.

2. *Industrial Relations and Engineering:*

1. Business Organization, Legal and social consideration.
2. Industrial and group psychology. Industrial acts and labour laws.
3. Concept and theories of Management.
4. Modes of industrial financing.
5. Financial and budgetary control. Product cost. Cost Control. Make or buy decision. Cashflow analysis. Break-even analysis. Financial evaluation of the new projects.
6. Materials Management; Inventory control.

7. Purchase and Procurement of stores. For industries.
8. Marketing and sales management. Pricing policy. Export and Import. Import substitution.
9. Value analysis and product value improvement.

### 3. *Production Materials & Processes & Management:*

#### (a) *Production Materials:*

Properties specifications and selection of production materials.

#### (b) *Production Processes:*

Evaluation of capabilities and application of various production processes for metals and non metals, like hot working, cold working cutting, forming and cutting of threads gear teeth and irregular surfaces, welding, surface treatment, Unconventional processes.

Variability of manufacturing processes. Process capability. Selection of surface quality, limits, fits and working tolerance depending on product requirement as well as on process capability. Production Drawings.

#### (c) *Production Management:*

Principles of product design.

Cost estimating. Product reliability. Concept of productivity.

Process planning principles. Initial data required for process design. Selection of manufacturing process. Operation sequence. Standard and allowable time. Alternate process cost comparison. Process standardization. Process sheet design.

Production Planning. Machine capability. Scheduling principles. Flow diagrams, Route charts. Application of operations research techniques like CPM, PERT and linear programming. Quality control. Quality planning. Design of Inspection schemes SQC Product and process control charts. Product testing.

### 4. *Elective Papers:*

#### (i) *Work Study:*

Analysis of processes. Operations and notions. Design of work place and equipment. Micromotion and motion

studies work measurement, techniques-stop watch study, performance rating methods. Standard data, predetermined fundamental motion time standards. Work sampling. Allowances-personal, process, fatigue and Machine and policy. Application of physiological techniques to work measurement problems. Sources of errors in work measurement and means of controlling.

(ii) *Tool Engineering:*

1. Tool design for metal cutting processes.
2. Design of press tools
3. Design of gauges and inspection tools.
4. Design of jigs, fixtures, work holding and tool holding devices.
5. Tool layouts for capstan, turret and auto lathe operations.
6. Economics of tooling and metal cutting.
7. Maintenance, inspection and sharpening of tools.

(iii) *Material Handling:*

Principles of material handling. Engineering and economic factors.

Classification of equipment, Gravity, roller and belt conveyors, elevators, screen and screw conveyors, pneumatic conveyors, cable ways, overhead equipment, ground track equipment, Hand trucks, fork lift trucks, skids, pallets, palletization systems. tractor-trailer systems.

Planning. Operation and costing of material handling systems. Bulk transport. Centralized systems. Container system for shipping, rail and road transport.

Storage of material. Shelf, bin rack bench.

Packing of industrial products. Crates, form packing Test for packing. Packing lists.

Plant layout. Classification of plants. Plants for job, batch and mass production. Service. Flow of material. Work station layout. Typical layouts Relation among plant layout process and material handling systems.

(iv) *Marketing and Export Promotion:*(a) *Marketing :*

Marketing concepts. Market via developing economy. Characteristics of consumer goods and industrial goods. Understanding the customer. Customer buying plans and motives. Marketing research methods. Types of market surveys. Product planning. Market share measurement. Sales forecasting methods—nonstatistical approaches and statistical measurements. Marketing cost analysis. Marketing institutions and channels. Pricing in industrial and consumer goods marketing. Pricing methods and strategies. Industrial advertisement and promotion. Pre-sale and after sale services for industrial goods. Industrial marketing research and changing technology. Marketing mix.

Interdependence of sales and production activities.

(b) *Export Promotion :*

Export promotion function. Role of Export Inspection council and Export Promotion Councils. Governmental and non-governmental efforts. Methods of export market survey and export market development. International fairs and their role in export promotion.

5. *Home Paper**System's Engineering & Design of Enterprises :*

Engineering problem situation. Design Methodology—project proposal. Feasibility study—from 'Need to Problem' Information sources and organisation. Synthesis of alternatives. Economic concepts. Preliminary design. Models Mathematical modeling. Estimation and order of magnitude analysis. Criterion function. Optimization. Detail design. Prototype and test. Communication modes.

*Note :*

Each student shall prepare the feasibility study report for a project to be decided in consultation with the guide. The student shall do the detail design, and prepare a prototype, if necessary and test it.

6. *Seminar or Extension Lectures :*

Each student shall deliver a seminar on a topic allotted to him by his seminar supervisor.



**7. Training Report :**

Each student shall undergo 10 to 12 weeks of industrial in-plant training planned jointly by his academic guide and industrial guide. He shall submit a detailed report at the end of the in-plant training.

**8. Project Report :**

Each student shall undertake a 10-12 weeks of *College Project* either in the industry in the college or in both as allotted by the academic guide during the in-plant training period and submit a detailed report at the end of the college, project.

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One Year Industry Oriented Postgraduate Diploma in Prestressed Concrete  
Scheme of Examination and Working

	Scheme of Examination (At the end of the Year)			Scheme of Working hours/week		
	Paper No. of Hrs.	Marks		Lect- ures	Course work	Total Hours/ week
		Paper	Course works			
(A) Academic Course (20-24 weeks)						
1. Structural Analysis	1	3	100	50	150	3 3 6
2. Concrete Technology	1	3	100	50	150	3 3 6
3. Prestressed concrete (buildings)	1	3	100	50	150	3 3 6
4. Prestressed Concrete (Bridge & other Structures)	1	3	100	50	150	3 3 6
5. Laboratory (Course work) in Concrete Technology	—	—	—	100	100	— 4 4
6. Seminar or extension lectures	—	—	—	100	100	— 2 2
				14	16	30

(B) *Practical Training (About 8 weeks)*

7. Training report	—	—	—	100	100	—	40 hrs/week
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(C) *College Project*

8. Project Report	—	—	—	300	300	—	40
							”
GRAND TOTAL	4	—	400	300	1200		”

*Post Graduate Diploma in Prestressed Concrete*

II DETAILED SYLLABI

1. *Structural Analysis*

- (a) Resume of classical methods of Structural Analysis.
- (b) Application of Matrices to Structural Engineering problems.
- (c) Numerical Procedures for Structural Engineering problems.
- (d) Multi-Storeyed frames-Portal Method, Cantilever Method, Factor Method, Kani's Method.

2. *Concrete Technology ;*

- (a) Materials-Properties, Classifications & tests.
- (b) Properties of Concrete and their tests, design of mixes.
- (c) Movements, in Concrete, Creep, shrinkage and thermal movements.
- (d) Strength parameters of concrete and their relationships Tests for Strength parameters of concrete.
- (e) Special Concretes.
- (f) Field Practices-Mixing, laying, transportation and curing.
- (g) Form Work-design and Construction.
- (h) Techniques of precast concrete Construction.

3. *Prestressed Concrete (Buildings)*

- (a) Introduction to Indian Standards and othe relevant codes.
- (b) Various methods of Prestessing-and anchorages.
- (c) Losses of Prestressing-and their estimation.
- (d) Analysis and design of sections for flexure, shear and Bond, Camber, deflection. Cable layouts. Stretching in stages. Design of end blocks.

- (e) Design of prestressed Concrete slabs—one way, two way and simple and continuous flat slabs.
- (f) Precast beams, cracking and ultimate loads.
- (g) Statically Indeterminate Structures—Continuous beams.
- (h) Load balancing Methods. Portal Frames.

4. *Prestressed Concrete (Bridge and other Structures)*

- (a) Discussion of Bridge Codes.
- (b) Design of T-Beam bridge, balanced Cantilever bridge, Portal and Arch Bridges. Bow-String Girder bridges.
- (c) Circular Prestressing—Prestressed tanks.
- (d) Compression members—piles.
- (e) Tension members.
- (f) Bridge—layouts, launching of girders and other practical aspects of bridge construction.

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*Teaching and Examination Scheme for M. E. in Nonferrous Metallurgy*

A. Teaching Scheme : Ist Year.	L	T	P
1. Mathematics	3	—	—
2. Advanced Metallurgical Thermodynamics	2	—	2
3. Advanced metallurgical kinetics.	2	—	2
4. Experimental techniques in metallurgy.	2	—	3
5. Physical chemistry of metal extraction.	3	1	—
6. Foreign language.	—	—	—
7. Dissertation	—	—	5
	12 +	1 +	12 = 25

## 2nd Year

7. Advances in nonferrous extractive metallurgy.	3	1	2
8. 9. Any two of the following subjects:			
(a) Elective-I	2	1	—
(b) Elective-II	2	1	—
(i) Physical metallurgy of nonferrous metals and alloys.			
(ii) Advanced materials science.			
(iii) Advanced aluminium technology.			
(iv) Industrial metallurgy.			
(v) Physical Metallurgy of light metals and alloys-			
(vi) Advanced mineral dressing.			
10. Seminar	—	—	2
11. Dissertation	—	—	10
	7	+	3
		+	15
			=25

*B. Examination Scheme :*

Ist Year.	Paper duration	Exam. Marks	Course work	Total
1. Mathematics	3	100	100	200
2. Advanced metallurgical thermodynamics.	3	100	100	200
3. Advanced metallurgical kinetics.	3	100	100	200
4. Experimental techniques in metallurgy.	3	100	100	200
5. Physical Chemistry of metal extraction.	3	100	100	200
6. Foreign language	—	—	—	—
		500	500	1000

*Second Year.*

7. Advances in nonferrous extractive metallurgy.	3	100	100	200
8. Elective-I	3	100	100	200
9. Elective-II	—	100	100	200
10. Seminar	—	100	100	100
11. Disseration.	—	400	400	400
		<u>800</u>	<u>800</u>	<u>1100</u>

*Advanced Metallurgical Thermodynamics :*

Application of basic laws of thermo-dynamics to the analysis of the physical and chemical behaviour of metals.

Thermodynamics principles underlying extraction and refining of metals at high temperature.

Fundamentals of statistical thermodynamics and its application to metallic system.

Advanced treatment of thermodynamics properties of metallurgical system. Properties of solution, thermodynamics of interfaces.

Non-equilibrium solid state phase transformations. Gas metal and slag-metal reactions.

*Advanced Metallurgical Kinetics :*

Kinetics principles underlying extraction and refining of metals at high temperatures. Absolute reaction rate theory. Kinetics of diffusion in oxides, molten sulphides and liquid silicates at high temperatures. Kinetics of iron ore reduction. Kinetics of nucleation and nuclei growth at high temperatures. Contribution to nucleation theory from kinetic studies in semi conductors. Kinetics of solidification. Kinetics of diffusion sintering in the solid state. Kinetics of sintering in the presence of a liquid phase at high temperatures. Kinetics of phase transformations in solids at high temperatures. Kinetics of solid reactions in ferrites Kinetics of graphitization. Kinetics of the thermal decomposition of some minerals of metallurgical interes t.

*Advanced materials science :*

Electronic structure of matter, quantum and statistical mechanics, free electron and zone theory; electrical properties of metals, semiconductors, insulation, magnetic properties, thermal properties super conductivity, thermoelectricity.

Atomic and microstructure of crystalline and non-crystalline solids; imperfections in materials, their classification and their influence on properties. Equilibrium and non-equilibrium transformations in materials and their engineering applications. Strengthening mechanism in solids. Elastic, plastic viscous and visco elastic properties. Dislocation theories of yielding, working, hardening recovery and recrystallization, mechanisms of creep, fatigue and fracture. Formation and structure of high polymers, rubbers, properties and application.

Ceramics, cements, ceramic coated materials, properties and applications.

Whiskers, composite materials properties and applications,

*Industrial metallurgy:*

Plant location and layout of metallurgical industries. Instrumentation in metallurgical industries, industrial furnaces Structure of industry viz. directive (Executive), administration management and production and functions thereof. Centralisation and decentralisation.

Energy and material balances and flowsheets. Evaluation of various iron and steel-making and non-ferrous metallurgical processes. Study of fuel and refractory policy of metallurgical industries.

Methods of determining efficiency and productivity of manufacturing units and factors affecting them.

Production, planning, control and scheduling. Inventory control. Principles of linear programming and its application to metallurgical industries.

Process and quality control. Time and Motion study.

*Advanced mineral dressing :*

Comminution, physical concepts of fracture, Theory of crushing and grinding.



Theoretical basis of ore beneficiation by gravity, electrical and flotation concentration. The phases in flotation systems, surface tension, contact angles, Gibb's absorption equation. The physical chemistry of solid-gas-solution interfaces. Electrical effects at interfaces-Electro Kinetic phenomena at gas-liquid interfaces Mechanism and modulation of collection. Kinetic considerations in flotation.

General principles of mill location, mill design and construction, mill operation, mineral dressing economics. milling cost and evaluation of metallurgical results.

## APPENDIX-XI

*Ref :—Res. No. 12 dated 3.3.71 of the Board of Studies in Engineering.)*

### III B.E. (Civil)

#### MECHANICAL ENGINEERING III (Civil)

*Mechanical Fabrication processes :* Riveting-hot and cold, Welding gas and electric arc. Electrodes and their selection, position welding and welded joints; Plumbing, Sheet metal working, pneumatic tools for ramming, riveting, vibrating and chiselling.

*Mechanical Handling :* Basic constructional features and principle of working of conveyors, Elevators, Fork-lifts trucks, cranes, crabs and winches.

*Earth moving equipment :* Basic constructional features and principle of working of Shovels, Graders and Bulldozers.

*Irrigation Machinery :* Types of pumps used for low and high head small and large discharge service. Construction and principle of working, Starting, stopping, operation and maintenance of pumps. Pump characteristics, specifying the pump for different service. Selection of drive for the pumps diesel engine and electric motors. Specifying the drive.

*Agricultural Equipment :* Basic constructional features and principle of working of tractors, crawlers and their implements drawbars, Power take off shafts, Harrow, Plough and mow thrashers.

Elements of heating, ventilation and air conditioning. Load calculation. Heating systems, ventilation systems. Principles of air conditioning. Application to community and residential buildings. Application of refrigeration in construction of dams, tunnels and skating rinks.

## APPENDIX XII

*III B.E. (Mech.)*ENGINEERING METALLURGY AND  
MATERIALS SCIENCE

Engineering properties of metals and alloys. Crystalline structure, phase equilibrium.

Heat treatment of Metals and alloys. Effect on strength, hardness and structure.

Metallurgy of melting, rolling, forging and joining processes in mechanical engineering.

Destructive and non-destructive testing of metals and alloys.

Corrosion, stress-corrosion, fatigue and creep in mechanical engineering materials.

Pyrometry

Properties and applications of refractory and insulating materials, rubber, plastics and ceramics.

## APPENDIX-XIII

### III B.E. (Elec.)

#### MECHANICAL ENGINEERING III (E)

Internal energy, enthalpy and change of heat, work done. Calculation of entropy, for thermodynamic processes on steam.

Steam power cycles-Rankine and modified Rankine cycle.

Steam nozzles : Flow of steam through nozzle, critical pressure ratio; super saturated flow; effect of friction, conditions for maximum discharge.

Steam Turbines : Impulse and reaction types, methods of compounding, velocity diagrams.

Steam turbine cycles : Bleeding reheating and regenerative feed heating. Stage efficiency. Overall efficiency.

Constructional features of steam turbines. Governing of steam turbines and governors. Special turbines, like pass out back pressure and mixed flow turbines.

Steam condensers; Types, construction and working principles. Calculation of cooling water requirement, and vacuum efficiency, sources of air leakage, combined and separate extraction pumps.

Cooling towers and spray ponds.

Air compressors : Working cycle of single and multistage reciprocating compressors. Conditions of minimum work. Effect of clearance, intercooling and suction conduction. Imperfect intercooling. Air horse power, shaft horse power; volumetric isothermal adiabatic and overall efficiencies. Constructional features and safety devices.

Rotary compressors : Positive displacement and aerodynamic type. Principle of working constructional features and polytropic index. Power requirement and efficiency.

Filting of air.

Internal Combustion Power Plants : Schematic Layout, maintenance, Log Book, Selection, Power limits.

Introduction to machine tools like lathe, Shaper drilling machine, Milling machine, turret lathe, grinders.

Forging and press working : Power hammers, forging dies, power presses, press working dies.

Welding; Oxyacetylene gas welding and equipment. Oxyacetylene torch cutting. Thermit welding soldering and brazing. Arc welding and its equipment. Electrodes-classification and applications. Resistance welding.

## APPENDIX-XIV

## THIRD B.E. EXAMINATION

(Metallurgical Engg. Branch)

	<i>Subject</i>	<i>Hrs/Week</i>	<i>Exam./Hr.</i>	<i>Marks</i>
1.	Mechanics of Materials	2+1T	3	100
2.	Electrical Engineering	2	3	100
3.	Geology and Mineralogy	2	3	100
4.	Introduction to Process Metallurgy.	2+1T	3	100
5.	Introduction to Physical Met.	2	3	100
6.	Metallurgical and Instrumental Analysis.	2	3	100
7.	Metallurgical Thermodynamics and Kinetics.	2	3	100
8.	Elements of Material Science.	2+1T	3	100
<hr/>				
		16+3T		800
 B. <i>Practicals of Session I as :</i>				
9.	Metallurgical Drawing	4		75
10.	Electrical Laboratory & Workshop Practice.	2		75
11.	Geology and Mineralogy	3		75
12.	Metallurgical Thermodynamics and kinetics.	2		50
13.	Metallurgical and Instrumental Analysis.	3		75
14.	Physical Metallurgy	2		50
<hr/>				
		16		400

C. <i>Sessionals only</i> :	—	Nil
D. 15 General Fitness for Profession.	—	100
Grand total	35	1300

*Additional Paper (Optional).*

Mathematics VIII	Max. Marks	100
or		
Science of Metals	Pass Marks	33

## APPENDIX-XV

### III-B.E. (Met.)

#### *Introduction to Process Metallurgy :*

Economic importance of metallurgical industries. Location of principal ore bodies and extraction plants. Indian mineral resources and metallurgical industries.

Preparation of ores for smelting. Roasting, reduction, and matte smelting, converting, refining and electrolysis. Simplified flow sheets for the production of iron and steel, copper, aluminium, lead and zinc.

Indian resources of fuels Comparative study of solid, liquid and gaseous fuels. Constitution of coal, washing coal, Combustion coal. Carbonization. Coking industries. Metallurgical coke. Testing of Fuels. Fuels economy. Production of water gas and producer gas.

Principal acid, basic and neutral refractories, their composition and important properties. Insulation and other special refractories. Manufacture and testing of important refractory materials.

Selection of refractories for the furnace construction with special reference to Indian Metallurgical Industries.



## APPENDIX-XVI

*Introduction to Physical Metallurgy :*

Solidification of pure metals and alloys, Chilled, Columnar and equiaxial crystals, dendritic growth, imperfections : normal, inverse and gravity segregation and coring.

Phase rule, binary equilibrium systems : isomorphous, eutectic, peritectic, monotectic etc., Order disorder transformation; Study of phase diagrams, metallography and properties of commercially important alloy systems viz Cu-Zn, Cu-Sn, Cu-Ni, Cu-Al, Pb-Sn, Al-Cu, Al-Si etc.

Detailed study of iron carbon equilibrium diagram, effect of alloying elements.

Basic principles of heat-treatment; annealing, normalizing, hardening and tempering. T.T.T. curve, hardenability; factors affecting.

Metallurgical microscope : principle, defects, chromatic and spherical aberrations etc. type of microscopy; dark and bright field illumination, oblique illumination, polarized light etc.

Methods of detection of phase changes and construction of equilibrium diagrams Resistivity measurements, dilatometry, cooling and heating curves, specific heat measurements.

## APPENDIX-XVII

### *Metallurgical and Instrumental Analysis :*

Methods of sampling of ores, metals and alloys and other metallurgical products.

Specific methods of detection of Cr, Ni, Cu, Pb, Zn, Al, Mn and W in ferrous and nonferrous alloys. Spot tests.

Quantitative analysis of Iron and Steel, Alloy steels, neo ferrous metals and alloys, ores and slags.

Fire-assay of precious metals, proximate and ultimate analysis of coal. Analysis of liquid and gaseous fuels.

*Instrumental* : Importance of instrumental analysis in comparison with chemical analysis. Fundamental physicochemical principles involved and equipment required in such analysis viz colorimetry, absorptiometry, spectroscopy, potentiometry; amperometric titration, Coulometric titration, polarography, Conductometry, electro-analysis and flame photometry.

X-rays and electron-probe micro-analyser as means of chemical analysis.

Errors of observations and accuracy of measurements.

## APPENDIX-XVIII

*Science of Metals :*

Structure of the atom: Quantum numbers, electronic configuration of elements and its influence on their properties.

Basic properties of the nucleus, nuclear forces, general features of nuclear reactions, natural radioactivity, artificial transmutations. Review of kinetic theory of gases, statistical mechanics electron theory of metals. Para- and dia-magnetism.

X-rays properties and production, continuous and characteristic spectra, absorption of x-rays, filters, scattering and diffraction. Principles underlying power, rotating crystal and Laue method used in x-ray metallography.

Diffusion :—Mass transport in solids, Fick's law, Kirkendall effect. Mechanisms of diffusion.

Thermodynamic of alloying, free energy composition diagrams.

Basic concepts of the theory of dislocation.

## APPENDIX-D

(Ref :-Res. No. 5 (v) of the Faculty of Engg. dated 24/31st March. 1971.)

### II-(Detailed syllabi)

#### 1. *Geology of Mineral Deposits :*

Nature of minerals, detailed study of minerals with respect to their physical and optical properties, mode of occurrence, association and alteration.

The occurrence and commercial uses of metallic and non metallic minerals. Mineral fuels ore deposits of India. Importance of minerals in National Economy. National Mineral Policy, Geographical and political factors in mineral uses and in price structures. Features peculiar to mineral economics. 'Economic' factors Common to mineral and manufacturing industries. Demand, Supply, productivity and marketing. Impact of atomic energy on conventional fuels. Economics of important minerals and metals.

The above study will be oriented in the context of mineral beneficiation programme.

## APPENDIX-E

(Ref :- Res, No, 5(III) of the faculty of Engg. dated 24/31st March 1971.)

Industry Oriented Postgraduate Diploma in Electrical Drives.  
Scheme of Working and Examinations.

Particulars,	Scheme of Examination (at the end of the year)		Scheme of Working Hours/Week	
	Paper No. of Hrs.	Marks	Paper Course Total Work	Lectures Course Total Work
(A) Academic Course :—(20-24 weeks)				
1. Theory of Electrical Drives	1	3	100	50
2. Control of Electrical Motors,	1	3	100	50
3. Control System Components.	1	3	100	50
4. Elective Paper (any one of the following)	1	3	100	50
(i) Electric Traction,				
(ii) Computer Engineering,				
(iii) Industrial Electronics.				
5. Home Paper	—	—	100	100
6. Seminar or Extension Lectures,	—	—	100	100
			14	16
			30	hrs

(B) <i>In Plant Training</i> (10-12 weeks)					
					40 hrs. week
7. Training report	—	—	200	—	—
(C) <i>Project</i> :—					40 hrs. week
8. Project Report.	—	—	400	—	—
GRAND TOTAL	4	—	400	1000	1400

### A 1. *Theory of Electrical Drives* :—

1. Fundamentals of Electric Drives. General requirements, Main Parameters of Electric Drive.
2. Fundamentals of Electric Drive Dynamics. Relationships describing the motion of an Electric drive. Acceleration and Retardation times.
3. Mechanical Characteristics of Electric Drives. Calculation of External Resistances. Mechanical Characteristics of D.C. Motors Induction motors and synchronous motors. Calculation of External Resistances for D.C. Motors, Induction motors and synchronous motors.
4. Speed control of Electric Drives.  
Basic parameters, Speed Control of D.C. motors and Induction motors, Application of Rotating Amplifiers for speed stabilisation and control.
5. Heating of Motors and Selection of their Ratings. Basic considerations, Heating and cooling of motors. Service conditions for electric Drives. Motor Applications for continuous duty. Constant load, continuous duty variable load, Intermittent duty, short time duty.
6. Transient performance of Electric Drives.

### A 2. *Control of Electric Motors*.

1. *Introduction* :—Symbols and Diagrams—Contactors and Relays- Accessories—Construction of control Apparatus.
2. *Control of D.C. Motors* :—
  - a. Shunt motors : Braking-speed regulation—Multivoltage and Adjustable voltage control—Motor Protection—Starters.
  - b. Series Motors : Braking-Speed regulation—Motor Protection. Starters.
  - c. Two-motor drives—Series-Parallel Control.
3. *Control of A.C. Motors* :—
  - a. Polyphase Squirrel-cage Motors : Starting, Reversing, Stopping and speed control.

- b. Polyphase Wound-Rotor Motors : Starting, Reversing and Stopping. Manual and Magnetic Controllers. Methods of speed control including injected e.m.f. systems.
- c. Single phase Motors : General Description-Types of Controllers.
- d. Synchronous Motors : Starting Methods-Synchronizing—Reversing—Braking.
4. *Logic Functions and Static Switching—Basic Principles.*
5. Electrical Equipment and control Circuits for :—
  - ( i ) Machine tools.
  - ( ii ) Hoists and Cranes.
  - ( iii ) Rolling Mills.
  - ( iv ) Pumps.
  - ( v ) Compressors.

### A (3) CONTROL SYSTEM COMPONENTS

#### (Electrical Drives)

*D.C. Amplifiers* :—Drift in D.C. Amplifiers; Cathode follower; the difference amplifier; interstage coupling networks; transistor d.c. amplifier, drift in transistor amplifiers; multistage amplifiers; chopper stabilized d.c. amplifier.

*Power Amplifiers* :—A.C. power amplifiers; D.C. power amplifiers; Thyatron amplifiers; Thyatron amplifiers with inductive load and D.C. motor load; Relay amplifier stability, Relay amplifier Static characteristics, the frequency response of a relay amplifire; Magnetic amplifiers; series connected magnetic amplifiers; Parellel connected magnetic amplifier, magnetic amplifiers with feed back; selfsaturated Magnetic amplifiers; Ramey magnetic amplifier;

*D.C. Machines* :—Simple D.C. generator and its equivalent circuits, The Rotoral generator, The regulex generation; The amplidyne generator, D.C. motors.

*Synchros and Related Devices* :—Desirable characteristics of transducers, operation of synchros; Static error, residual voltages and velocity errors, Two spend systems, The differential generator, synchro repeater, variable reluctance transducers, The Microsyn.



*Demodulators and Modulators* :—Fundamental concepts, Half wave and full wave discriminator circuits, Diode discriminators. Electromechanical demodulator, Modulators, Drift in modulators.

*A.C. Motors* :—Operation of A.C. servomotor, induction motor as a tachometer, shaded pole induction motor.

*Silicon Controlled Rectifiers* :—Operation of Silicon controlled rectifier; Half wave silicon controlled rectifier or switch, full wave silicon controlled rectifier or switch, S.B.K. power supply other applications of S.C.R.

*Non Electrical Control System Components* :—Basic ideas of hydraulic control systems; elementary ideas about hydraulic pumps and valves, used for control systems, Basic ideas about Pneumatic control systems, and pneumatic components.

## A (4i) ELECTRICAL TRACTION

(Elective)

1. Systems of Electric Traction.
2. Traction Motors.
3. Characteristic of D.C., single phase A.C. and A.C. Polyphase Traction motors.
4. Control of Traction Motors :  
 Controllers, Starting and speed control of Traction Motors, Control Schemes, Design of starting resistances, Electric Braking of traction motors.
5. Testing of Traction motors.
6. Auxiliary Electric Equipment for Electric Locomotive and Motor coaches :  
 Current Collectors, Power Supply for Brakes and ventilating apparatus, Power supply for auxiliary circuits.
8. Feeding and Distribution Systems :  
 Over Head Lines, Sub-stations, Stray currents, Interference effects on communication circuits.
8. Mechanics of Train Movement :  
 Analysis of speed Time Curve for Electric Train, Relationship between principal quantities in speed

time curves, factors affecting scheduled speed, Tractive effect for propulsion of Train, Power and energy output from driving axles. Factors affecting energy consumption.

9. Traction Calculations :

Traction Equation, Tractive Resistance, Adhesion Plotting of duty cycle diagrams.

10. Calculations for Electric Traction lines :

Lines fed from one end,

Lines fed from two ends.

A (4ii) COMPUTER ENGINEERING.

*Digital Computers :—*

Basic layout of a digital computer. Applications, Computer Arithmetic, Binary counting and Binary Arithmetic. Conversion to other systems. Counting logic circuits, AND OR and INHIBITOR circuits.

Introduction to calculation circuits. Storage systems, Counter storage, Magnetic storage. Forrite memory. Basic ideas of programming.

*Analogue computers :—*

Operational amplifiers, potentiometers, multipliers and function generators. Basic mathematical operations. Time and magnitude scaling. Simulation. Applications in the solution of differential equations.



B. In-Plant Training (10-12 weeks)					
7. Training report.	—	—	200	200	40 hrs. week
C. Project.	—	—	—	—	—
8. Project Report.	—	—	400	400	40 hrs.
Grand Total	4	—	400	1000	1400

## A (i) THEORY OF INSTRUMENTATION

*Galvanometer Dynamic* :—Differential equations of torque and their solutions, Determination of parameters, Steady State solution, Galvanometer resonance and low pass bandwidth, Vibration Galvanometer.

*Errors of measurement* :—Definition and classification of Errors Gross Errors, Instrument errors, Environmental Errors, Observational Errors, Residual Errors, Avoiding Errors.

*Statistics and Errors* :—The mean of raw Data, Deviations, The spread of Raw Data, Standard Deviation. Grouped Data, Normalization of Histogram ordinates, Probability, Continuous Curves Representing Distributions, Integral Forms, The Gaussian Error Curves, Probability tables.

*Combination of Errors* :—Variance of the sum of two sets, Extension and Interpretations, standard Deviation of the Mean, Errors of computed Results, Approximate standard Deviation of Computed Results, Approximate limit of Error of computed Results, Special functional forms, Examples,

*Deflection method of measurement* :—Methods of measurement, Direct general deflection methods with examples Indirect general deflection methods with examples, Half deflection Method, comparison method substitution method, Differential method, Differential Voltmeter, ammeter and Galvanometer.

*Null methods of measurement* :—General null methods, Slide back Voltmeter, comparison Methods, Potentiometer principle, analysis, and errors, Galvanometer sensitivity Limitations, Substitution method, differential method, combined Null deflection/methods.

*Waveform and A.C. meters* :—Galvanometer response to Nonsinusoidal Input, Galvanometer square wave response, time domain and frequency domain analysis, Rectifier instruments and their characteristics Thermocouple Instruments.

*Square Law meter movements* :—Electrostatic, Moving Iron and Electrodynamometer Instruments,

*Treatment and Data* :—Significant figures, Computations based on binomial expansions, Graphical presentation of Data, Linear graphs and their examples, Empirical equations and their examples.

## A (2) INSTRUMENTS FOR PROCESS CONTROL

1. Instrumentation and Control Fundamentals.
2. Measurement of pressure—Manometers, Bourdon Pressure gauges, Diaphragm Pressure Elements, Vacuum and compound gauges
3. Temperature Measurement—Theory of temperature measurement—Filled system thermometers—Bimetal Thermometers—Pyrometers—Thermistors.
4. Measurement of flow—Different types of flow meters.
5. Measurement of Liquid level—Floats and liquid level gauges.
6. Control and Measurement of Heating. Air-conditioning and Refrigeration Systems.
7. Instrumentations for Boilers and Steam turbines.
8. Instrumentation for Nuclear Power Plants.
9. Recorders—different types of recorders used in measurement and control.



## A (3) CONTROL SYSTEM COMPONENTS

### (Instrumentation)

*Mechanical Network and Gears* :—Springs masses and dashpots. Mechanical equalizers, Electromechanical Network for carrier servos, The Lancaster damper, Gear Ball screw actuators.

*Mechanical Components* :—Differential gears, Universal joint, The flyweight tachometer, The Gyroscope, and its applications.

*Pump Controlled Hydraulic Systems* :—Basic types of hydraulic control systems, pump controlled hydraulic system, various types of hydraulic pumps piston pumps, vane pumps, gear pumps, ball pump, Hydraulic transmission lines.

*Valve controlled Hydraulic Systems* :—Simple hydraulic valve and actuator, spool type pilot valves, pulsed operation of hydraulic valves, Flapper valves, Nozzle valves, slide

valves, Two stage valves, pressure regulating devices, choice of operating pressure for hydraulic systems.

*Pneumatic Systems* :—Advantages of pneumatic systems, Basic ideas about pneumatic flow, pneumatic Electric analogues and pneumatic control transfer functions, A pneumatic control system.

*Pneumatic components* :—Basic ideas about pneumatic components and their comparison with electric and hydraulic systems. choice of operating pressures, pneumatic power supplies, pneumatic control valves, pneumatic motors Actuators.

*Elements of Electronic Control System Components* :—D. C. Amplifiers, Power Amplifiers, thyatron amplifiers, magnetic amplifier, silicon controlled rectifiers, basic ideas about demodulators and modulators.

*Elements and Electric Control System Components* :—D. C. machines, rototrol regulex and amplidyne. synchros, A. C. Servomotors.

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#### 4 (ii) COMPUTER ENGINEERING

##### *Digital Computers :*

Basic layout of a digital computer. Applications. Computer Arithmetic, Binary counting and Binary Arithmetic. Conversion to other systems, Counting logic circuits, AND, OR and INHIBITOR circuits.

Introduction to calculation circuits. Storage systems, Counter storage, Magnetic storage, Ferrite memory. Basic ideas of programming.

##### *Analogue computers :*

Operational amplifiers, potentiometers, multipliers and function generators. Basic mathematical operations. Time and magnitude scaling. Simulation. Applications in the solution of differential equations.

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## 4 (iii) INDUSTRIAL ELECTRONICS

*Resistance Welding* :-The resistance welding process, Automatic sequence timer, synchronous Weld Control, Follow up or Trailing Tube Circuit, Tuning the weld, Heat Control, Energy storage welding system, polyphase welding system.

*Electronic Motor Control* :-Thyratron and thyristor supply for d. c. motors, speed regulation by armature voltage control, I R drop compensation, Armature current limiting, speed control by tachometer, Field weakening, simple static d. c. motor starter, simple Induction motor control system, variable frequency control of A. C. Motors.

*Industrial Power Conversion* :-Rectifier types and ratings, metallic rectifiers, pool type rectifiers, effect of transformer leakage reactance, voltage control by delayed ignition, Efficiency and transformer rating, circuits for supplying ignitor pulses, direct to alternating current inversions.

*Induction and Dielectric heating* :-Induction heating and its applications, Dielectric heating and its application.

Basic Ideas about production of X-rays, and properties of X-rays.

*Photoelectric Devices* :-Various types of photoelectric relays and their applications.. Photoelectric inspection devices, Photoelectric counting and photoelectric safety devices.



## 4 (i) TELEMETRY AND REMOTE CONTROL

1. Principles of Telemetry—Pneumatic and Electrical Systems—Transducers.
2. Point to point Telemetry—Characteristics of Transmission Lines—Examples of Telemetry used in industry and interconnected Power Systems.
3. Fundamental principles of Statistical Theory of Communication—Channel errors—Quantization of continuous data.
4. Principle of Radio Telemetry—Basic Apparatus—Analysis of Amplitude modulation and frequency modulation—Principles of pluse code modulation.



5. Coding in Telemetry—Advantages of coding-parity and other checks—Error detecting and Error correcting codes.
6. Practical of Remote Control.
7. Basic components of Remote Control—Relays, Contactors, Selectors.
8. Practical application of Remote Control in Industry and Interconnected Power Systems.

APPENDIX 'G'

*(Ref: Res No. 5 (iv) of the Faculty of Engg. dated  
24th/31st March*

DRAFT ORDINANCES AND REGULATIONS FOR  
ADMISSION OF STUDENTS TO THE EXAMI-  
NATIONS OF POSTGRADUATE DIPLOMA  
COURSE IN CIVIL, MECHANICAL,  
ELECTRICAT & METALLURGI-  
CAL ENGINEERING.

- O-R Course of studies for Post-graduate Diploma in Civil Mechanical, Electrical & Metallurgical Engineering shall extend over a period of not less than one academic session starting from 1st August every year. On satisfactory completion of the course after passing examinations, a candidate will be awarded the post-graduate diploma in respective course.
- O-S No candidate will be admitted to the course of studies for the post-graduate diploma in any of the above branches unless he produces a satisfactory evidence to the effect that he has obtained atleast 50% marks in B. E. Degree from this University or equivalent thereof.
- O-T Examinations for the post-graduate diploma shall be held at the end of the session.
- O-U Examinations will be conducted by means of written papers, practicals (including sessional) and viva-voce.
- O-V-2 For a pass candidate must obtain a minimum of 40% marks in each of the written papers, 50% in course work project seminars, home paper training report and project report and 50% in the aggregate. A candidate obtaining 60% or more marks at one sitting will be declared to have passed in I class and a candidate obtaining more than 70% marks in the aggregate in one sitting will be declared for pass with honours.
- (2) Each written paper shall be set by one examiner either internal or external.

- (b) There shall be moderation Board who shall moderate all the question papers.

Practical examination in each practical including sessional course (work) will be conducted by Board of 2 examiners out of which one will ordinarily be an external examiner.

- O-V A candidate appearing at postgraduate diploma course in (Civil) Irrigation & hydrology or Pre-stressed concrete will be required to show a competent knowledge of;

*Irrigation & Hydrology :*

1. Applied Mathematics
2. Design of Irrigation structures-I
3. Hydrology-I
4. Land-Water Management.
5. Elective (any one of the following)
  - (i) Design of Irrigation Structures-II
  - (ii) Hydrology-II
  - (iii) Elementary Water Resources Planning
6. Seminar
7. Training report.
8. Project Report.

*Pre-stressed Concrete :*

1. Structural Analysis
2. Concrete Technology
3. Prestressed concrete (building)
4. Prestressed concrete (Bridge & other structures)
5. Laboratory (course work) in concrete technology
6. Seminar
7. Training report.
8. Project report.

- O-VI Candidate appearing at postgraduate diploma in (Mech.) Industrial Engineering & Entrepreneurship shall be required to show competent knowledge of:—

1. Mathematical Methods (Mech.)
2. Industrial Relations & Engineering

3. Production Materials, processes & management
4. Elective paper (any one of the following) :
  - (i) Work study
  - (ii) Tool Engineering
  - (iii) Material Handling
  - (iv) Marketing & Export Promotion
5. Home paper on Systems Engineering & Design of enterprise.
6. Seminar
7. Training Report
8. Project report

O-VII Candidates appearing in postgraduate diploma (Elec.) Examinations in Electrical Drives or Instrumentations shall be required to show competent knowledge of :

*Electrical Drives :*

1. Theory of Electrical Drives
2. Control of Electrical Motors
3. Control system Components
4. Elective paper (any one of the following)
  - (i) Electric traction
  - (ii) Computer Engineering
  - (iii) Industrial Electronics
5. Home paper
6. Seminar
7. Training report
8. Project report

*Instrumentation :*

1. Theory of Instrumentation
2. Instruments for Process Control
3. Control System Components
4. Elective paper (any one of the following)
  - (i) Telementary and Remote control
  - (ii) Computer Engineering
  - (iii) Industrial Electronics
5. Home paper
6. Seminar

7. Training report

8. Project report

**O-VIII** Candidates appearing at postgraduate diploma (Met.) examinations in Mineral Dressings shall be required to show competent knowledge of :

1. Geology of Mineral Deposits

2. Principles of Mineral Dressing

3. Advanced Mineral Dressing

4. Advanced Extractive Metallurgy

5. Course Project

6. Seminars/Extension lectures

7. Training report

8. Project report

**O-X. III** -Candidate shall persue alongwith regular course of studies his investigations or in-plant training at the College or in an industry under the supervision of academic and/or industrial guide.

**R-38-A-B** Will also apply to the post-graduate diploma course  
**&R-C** examinations for the purpose of exemptions and supplementary examinaton.

## APPENDIX 'H'

Modified syllabus for M. E. (Civil) Hydraulics

## TEACHING AND EXAMINATION SCHEME

First year	Teaching hours per week			Exam. Hours	Marks		
	L	T	P		Theory	Prac. & Sessionals	Total
<i>A. Theory</i>							
(1) Advanced Mathematics (Civill)	3	1	-	3	100	25	125
(2) Experimental Techniques (Hyd)	3	1	-	3	100	25	125
(3) Fluid Mechanics	3	1	-	3	100	50	150
(4) Engineering Hydrology.	3	1	-	3	100	50	150
(5) Design of Hydraulic Structures I	3	1	-	3	100	50	150
<i>B. Practicals &amp; Sessionals only</i>							
(6) Hydraulics Laboratory	-	-	4	-	-	50	50
(7) Foreign Language	-	-	-	-	(Certificate only)		
Total	15	5	4		500	250	750

## Second year

*A. Theory*

(1) Advanced Hydraulics	3	1	-	3	100	50	150
(2) Design of Hydraulic Structures II	3	1	-	4	100	50	150

*Elective*

(3) Water Resources Planning or Water Power Engg.	3	1	-	3	100	50	150
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*B. Practicals & Sessionals only*

(4) Design & Project work.	-	-	6	-	-	100	100
(5) Seminar	-	-	3	-	-	100	100
(6) Thesis/Dissertation	-	-	4	-	-	300	300

9	3	13	300	650	950
Grand Total					1700

## DETAILED SYLLABII

### 1. *Advanced Mathematics (Civil)*

Same syllabus as existing.

### 2. *Experimental Techniques (Hyd.)*

- (a) Methods of stress and strain measurement. Model studies. Begg's Deformameter, spline models.

Mechanical electrical and optical strain gauges. Measurements of transient strains. Oscilloscope and oscillographs.

Pressure cells and capsules for study of stresses. Principles of Photoelasticity and its uses for stress-strain measurement in models.

- (b) Measurement of fluid flow: Pressure, velocity and discharge measurement. Use of high speed photography in hydrodynamic measurements. Flow visualisation techniques. Schlieren photography.

Electrical analogy for fluid flow problems analog circuits and its limitations. Tracer technique for ground and surface flow.

Study of wind and water tunnels.

### 3. *Fluid Mechanics*

Same syllabus as for the existing title of 'Advanced Fluid Mechanics and Theory of Elasticity'.

### 4. *Engineering Hydrology*

Same syllabus as that of the existing title of Advanced Hydraulics I.

### 5. *Design of Hydraulic Structures I*

General information regarding different types of dams.

Gravity Dams: Forces acting on gravity dams. General conditions of stability, Calculation of stresses, Internal stresses and stresses around openings in the dams. Foundation exploration and treatment. Constructional methods of gravity dams. Control of cracking. Joints in the dam.

Earthen Dam. Stability of slopes. Slip circle and friction circle. Constructional methods of earthen dams.



Arch Dams: Cylinder formula. Principles of Trial load analysis. Dam models. Buttress dams. Unit column analysis of buttresses.

Spillways and waster weire. Different types and their design.

## SECOND YEAR SUBJECTS

### 1. *Advanced Hydraulics*

1. Resistance to flow in pipes and channels. Smooth turbulent flow and rough turbulent flow. Determination of friction factor.

2. Waterhammer in pipes. Numerical and graphical analysis.

3. Uniform flow in open channels with constant discharge. Critical flow and critical slope. Gradually and rapidly varied flow in channels. Methods of calculation. Flow profiles. Hydraulic jump in prismatic channels. Flow through transition and constrictions. Spatially varied flow.

4. Mobile bed channels. Stable channel design. empirical and rational approaches. Important Bed Load equations including regime equations. Resistance to flow in mobile bed channel.

### 2. *Design of Hydraulic Structures II.*

1. Design of weirs and other canal structures for surface and subsurface flow. Khosla's theory.

2. Design of penstocks. Economic analysis. Anchor blocks. Surge tanks. condition for stability.

3. Harbours and design of harbour structures like breakwaters. Wave forces. Canal locks. Hydraulic design of lock: filling and emptying methods.

4. Design of energy dissipation structures. Stilling basins. Design of channel transitions.

### 3. *Water Resources Planning*

Same syllabus as of the existnsng title 'Irrigation and Drainage Engnieering'.

*Alternative to 3*

WATER POWER ENGINEERING

Water power estimates; Regional power assessment. Primary and secondary power. Load factor and plant capacity factor.

Flow and power duration curves. Modern trends in the selection of turbines and determination of the optimum size of the units. Different types of water power development. Economics of development. Layout of the power project including the site and other aspects of component parts.

Underground power houses and its merits.

Pumped storage plants and its design aspects.

Low head development. Tubular turbines.

Tidal power and Tidal power plants.

## APPENDIX-I

*7. Electrical Machine Design*

Basic Principles of Electrical Machine design. Output co-efficient. Specific loadings. Specifications. Types of insulating Materials. Temperature rise in machines for continuous and intermittent ratings. Heat dissipation. Methods of ventilation and cooling Magnetic materials and allowable flux densities. Calculation of magnetic circuits. Real and apparent flux density. Tapered teeth. Carter's coefficient for salient poles. Magnetising current leakage fluxes and reactances. Magnetic pull.

Open and closed circuit armature windings. Single layer and double layer windings. Fractional slot windings. Calculation of forces between current carrying conductors. Application of the above design principles to D. C. Machines, transformers, Induction Motors and Synchronous Machines.

## APPENDIX-J

(Ref: Res. 10 of the Faculty of Engg. dated 24th/31st March)

MINIMUM REQUIREMENTS IN RESPECT OF  
TEACHING STAFF, BUILDING EQUIPMENT  
ETC. FOR B.E. COURSE

## 1. STAFF

*A. Teaching Staff*

The strength of academic staff is to be based on the teaching load analysis, assuming the distribution of teaching load to the various categories of staff as follows, the ratio of Senior to Junior posts being about 1:2.

Category of staff	Teaching load/ hrs. per week
1. Professor & Head of the Department	10
2. Professor	12
3. Reader	14
4. Lecturer	18

The staff and students ratio be about 1:10.

*B. Administrative, Technical and other Supporting staff.*

Should be adequate with at least a Technician grade B for each laboratory/workshop.

## BUILDINGS

## A. Departmental Buildings :

S. No.	Buildings	Floor space in Sq. ft.
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## 1. Mechanical Engineering Department :

## (a) Workshop &amp; Laboratories :

( i )	Technical Dynamics Lab.	800 Sq. Ft.
(ii )	Steam Engineering Lab.	2000 „ „
(iii)	I. C. Engines Lab.	1600 „ „
(iv)	Refrigeration & Air Conditioning Lab.	1200 „ „
( v )	Heat Transfer Lab.	1200 „ „
(vi)	Aerodynamic & Gas Dynamic Lab.	1600 „ „
(vii)	Metrology Lab. (Air conditioned)	1200 „ „

(viii)	Metal cutting Lab.-cum-tool room	1200	„	„
( ix )	Fuels & Lubrications Lab.	1200	„	„
( x )	Carpentary & Pattern making shop	2000	„	„
( xi )	Smithy shop	2000	„	„
( xii )	Fitting Shop	1200	„	„
(xiii)	Machine Shop	4800	„	„
(xiv)	Painting Plumbing and Sheet Metal Shop	2000	„	„
	(including maintenance section)			
(xv )	Welding Shop	1000	„	„

*(b) Staff & Ancillary Rooms*

( i )	Staff Room	3000	„	„
(ii )	Departmental Library & Reading Room	400	„	„
(iii)	Office	300	„	„
(iv)	Stores	1000	„	„
(v )	Model Room & Exhibition Room	1000	„	„

**2. Electrical Engineering Department**

*(a) Workshop & Laboratories :*

( i )	Electrical Machines Lab.	3500	„	„
(ii )	Measurements Lab.	2000	„	„
(iii)	Electronics Lab.	2000	„	„
(iv)	Electrical Workshop.	3000	„	„

*(b) Staff & Ancillary Rooms*

( i )	Staff rooms including of ice and store	3000	„	„
(ii )	Departmental Library & Reading Room	400	„	„

**3. Civil Engineering Department**

*(a) Workshop & Laboratories :*

( i )	Hydraulics Lab.	8000	„	„
(ii )	Survey Lab. & Store	1000	„	„
(iii)	Roads Laboratory	1000	„	„
(iv)	Public Health Engineering Lab.	1000	„	„

*(b) Staff & Ancillary Rooms*

( i )	Staff Rooms	2400	„	„
(ii )	Drawing office	900	„	„
(iii)	Departmental Library and Reading Rooms	400	„	„

**4. Structural Engineering Department***(a) Workshop & Laboratories*

( i )	Instrumentation and Departmental Workshop.	200	„	„
(ii)	R. C. C. Lab.	2000	„	„
(iii)	Structural Lab.	2000	„	„
(iv)	Soil Engineering Lab.	2000	„	„
( v )	Material Testing Lab.	3000	„	„
(vi)	Applied Mechaincs Lab.	2000	„	„

*(b) Staff & Ancillary Rooms*

( i )	Staff Rooms	2000	„	„
(ii)	Departmental Lib.	400	„	„
(iii)	Departmental office	240	„	„
(iv)	Miscellaneous	360	„	„

**5. Metallurgical Engineering Department***(a) Workshop and Laboratories*

( i )	Workshop	1600	„	„
(ii)	Heat Treatment Laboratory	2000	„	„
(iii)	Metallography including preparation Microscopy and dark room	1800	„	„
(iv)	Physics of Metals	600	„	„
( v )	Mechanical Testing	900	„	„
(vi)	General Laboratory (Fuels & Furnaces)	1000	„	„
(vii)	Electrometallurgy	400	„	„
(viii)	Ore Dressing	1500	„	„
(ix )	Metallurgical Analysis	600	„	„
( x )	Extractive Metallurgy	1000	„	„
(xi)	Nuclear Metallurgy	500	„	„
(xii)	Metallurgical Thermodynamics Lab.	500	„	„
(xiii)	Foundry Laboratory	1600	„	„

*(b) Staff and Ancillary Rooms*

( i )	Staff Rooms	1000	„	„
(ii)	Departmental Library & Reading Room	400	„	„
(iii)	Departmental Office, Museum, Stores etc.	1400	„	„

**6. Chemistry Department***(a) Laboratories etc.*

( i )	Engineering Chemistry Laboratory (Self sufficient unit)	3600	„	„
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*(ii) General Chemistry Laboratories*

( i )	Chemistry Laboratory I with balance room preparation room, incharge room and store of chemicals and acids	1850	„	„
( ii )	Chemistry Lab. II (Details same as above)	1850	„	„
(iii)	Chemistry Lab. III	1850	„	„
(iv)	Small Laboratory I	800	„	„
(v )	Small Laboratory-II	800	„	„
(vi)	Gas Plant	650	„	„

*B. Staff and Ancillary Rooms*

( i )	Staff Rooms	1200	„	„
(ii )	Departmental Library and Reading rooms	300	„	„

**7. Physics Department***(a) Laboratories etc.*

( i )	Physics Laboratory I with Semi-Dark room and dark room etc.	3000	Sq.Ft.
(ii )	Physics Laboratory II with Semi-dark room and dark room etc.	3000	„
(iii)	Storage, preparation and battary room workshop etc.	400	„

*(b) Staff and Ancillary Rooms*

( i )	Staff Rooms	1200	„
(ii )	Departmental library and Seminar Room	300	„

**8. Mathematics & Humanities Department**

( i )	Room for speech training etc.	750	„
(ii )	Stores for Maps etc.	200	„
(iii) ..	Staff and Ancillary Rooms	2000	„
(iv)	Departmental Library and Reading rooms	400	„

*(b) Academic buildings common to all Departments*

( i )	Central Library	9000	„
(ii )	Lecture Halls-6 (Seating 60)	6000	„

(iii)	Drawing Halls-2	5400	„
(iv)	Tutorial Rooms-10	3600	„
(v)	Auditorium Rooms To accommodate	750	person

*C. General Administrative buildings including Principal's room*

*D. Hostels : Buildings :* For atleast 50% of the students 200 Sq.Ft. per student including Dining hall, common room, reading room, Kitchen, Stores, W. C. Block circular passage varandha stair cases etc. etc.

(ii) Furniture & Equipment @Rs. 250/— per student.

*E. Staff Quarters :* This is to be determined according to local condition. It may possible for some staff members at some places to find residential accomodation outside college campus. In such a case it is not necessary for the College to construct the residential quarters for the entire staff, Further as many members of the subordinate staff as possible should be required to make their own residential arrangements outside college campus.

*F. Amenities Buildings :*

There is to be a provision to construct a number of small canteens on the College Campus for staff and students instead of one large canteen for the entire staff and students population. Besides this other amenities like Gymnasium, sports fields, indoor games etc., should be provided. Provision for swimming pool, college open air theatre etc., may also be made depending upon the situation of the College and availability of funds.

**3. Equipment including Books and Furniture :**

A. Equipment		Non-recurring
1. Mechanical Engg. Deptt.		18.00 lacs
2. Electrical Engg. Deptt.		12.00 lacs



- |   |            |
|---|------------|
| 3. Civil and structural<br>Engg. Department | 13.31 lacs |
| 4. Metallurgical Engg. Deptt.               | 10.00 lacs |
| 5. Physics Deptt.                           | 3.00 lacs  |
| 6. Chemistry Deptt.                         | 2.25 lacs  |

Rs. 10,000/- non-recurring to be provided  
for replacement of old equipment and  
purchase of new equipments in alternate  
years)

- |   |   |
|---|---|
| 7. Mathematics & Humanities Department. | 00.75 lacs  |
| 8. Books and Journals                   | Rs. 5.00 lacs non-recurring<br>and 00.75 lacs recurring<br>per annum. |

C. Furniture & Office Equipment : 10.00 lacs

4. Recurring Expenditure :

Rs. 4,000/- per student  
for intake of 120 and  
Rs. 3,750/- for intake of  
180 students and more.

Sd/— R. M. Advani,  
Convener.

Minimum requirements in general in respect of teaching staff, buildings, equipment, etc. for M. E. courses (for each specialization with an intake of 10 students) in addition to those prescribed for B. E., courses. Exact requirements would depend on the type of course and speciality of staff and equipment etc., already available :

## 1. Staff

### A. Teaching Staff

2. Readers

1. Lecturer

### B. Technical & Supporting Staff :

2. Supporting Technicians and 2 Labs.

Attendants/Class IV

## 2. Buildings

(a) Laboratory	1,500 Sq. Ft.
(b) Sitting accommodation for staff and other facilities.	400 „

## 3. Equipment Including Books & Furnitures :

A. Equipment :	1,00,000.00	Non-Recurring
B. Books & Journals	5,000.00	Recurring.

## Recurring Expenditure

Rs. 6,000/- per student with a minimum of Rs. 60,000/- for each course.

Sd/— R. M. Advani  
Convener

## APPENDIX 'K'

*(Ref. Res. No. 16 of the Faculty of Engg. dated 24/31st March 1971)*

Resolved to Recommend That since it is now accepted that the students and teachers should be actively associated with the authorities in the educational programmes of the Universities; the semester scheme, a new scheme of teaching and examinations etc., which is already approved and is to be introduced with effect from July, 1971 in the Faculty of Engineering & Technology, should be circulated for elucidation of opinion to all the teachers and to the students of the M. R. Engg. College forming the teaching faculty of the University.

MINUTES OF THE EMERGENCY MEETING OF THE  
SYNDICATE HELD ON SATURDAY, THE 27th  
MARCH, 1971 AT 10.15 A.M. IN THE UNI-  
VERSITY OFFICE, JAIPUR

**Present**

- Prof. P. L. Bhatnagar, Vice-Chancellor  
*(In the Chair)*
2. Dr. B. N. Consul
  3. Shri D. C. Swami
  4. Prof. G. C. Pande
  5. Prof. G. S. Sharma
  6. Dr. G. Narayanan
  7. Shri K. C. Bakiwala
  8. Dr. K. C. Khanna
  9. Prof. K. L. Varma
  10. Principal M. L. Agarwal
  11. Principal P. N. Mathur
  12. Principal (Mrs.) Rama Kochar

Shri L. P. Vaish, Offg. Registrar.

The Vice-Chancellor informed the Syndicate that (i) towards the end of January, 1971 when the atmosphere in the University was quite peaceful he thought of relinquishing charge of his office for reasons of his deteriorating health and inability to find time to devote to his research work and study, and accordingly he tendered his written resignation to the Chancellor of the University on the 30th January, 1971, (ii) the acceptance of the same was conveyed to him by the Chancellor only on the 26th March, 1971 with the remarks that the date on which he (Vice-Chancellor) would be relieved could not be intimated at the present moment and that he might, therefore, continue in his office for some time and help in the completion of the process for the selection of *his successor* (*Vide App. A*). The Vice-Chancellor further observed that it was

with a view to informing the Syndicate about this situation that the emergency meeting was called.

After giving this information the Vice-Chancellor offered his heart-felt gratitude to the members of the Syndicate and of all other University Bodies for the fullest Cooperation extended by them in conducting the affairs of the University. Whatever progress and development that had taken place in the University during the last two years added the Vice-Chancellor, was entirely due to their un-stinted support, of there have been any short comings he is fully responsible. In the end the Vice Chancellor wished godspeed for further all round progress of the University.

All the members of the Syndicate expressed their profound shock at the news broken to them and observed that though they very much liked to persuade the Vice-Chancellor to withdraw his resignation but in view of the fact that he had taken this step because of his indifferent health and for devoting time for academic pursuit, and that the same had been accepted by the Chancellor, they did not press him to do so.

All the members of the Syndicate, one by one, expressed their admiration and grateful thanks for the leadership given by the Vice-Chancellor Dr. P. L. Bhatnagar in the various spheres of the University working during his tenure of office.

Arising out of the above the Syndicate

*Resolved as follows :*

- ( I ) Under Section 12 (6) of the University Act a Selection Committee be *constituted* for the appointment of a successor to Prof. P.L. Bhatnagar.
- (II ) Under Section 12 (1) (i) of the University Act Dr. C. D. Deshmukh, Ex. Chairman, University Grants Commission be *nominated* on the Selection Committee.
- (III) The Chancellor and the Chairman, University Grants Commission be requested to appoint their nominees on the Selection Committee.

Sd/— P. L. Bhatnagar  
Vice-Chancellor

Sd/— L. P. Vaish  
Registrar.

( APPENDIX 'A' )

CONFIDENTIAL

26th March, 1971.

My dear Bhatnagar Sahib,

I had received your letter some days back in which you had expressed your desire to resign. I wanted you to stay on. Your work during the last two years has been commendable. My attempts to persuade you to withdraw that have failed. I am left with no option but to agree to your wishes and accept your resignation. But, the date on which you can be relieved cannot be intimated to you just at present. I would request you to continue in this office for sometime and help us to complete the processes for the selection of your successor.

With regards,

Yours sincerely,  
Sd/—

( Hukam Singh )

Prof. P. L. Bhatnagar,  
Vice-Chancellor,  
Rajasthan University,  
Jaipur.

शनिवार, दिनांक 26 मार्च, 1971 को दिन के 11 बजे  
विश्वविद्यालय के मानविकी हाल (ह्यूमेनिटीज  
बिल्डिंग), जयपुर में हुई सीनेट की वार्षिक  
बैठक की कार्यवाही का विवरण ।

### उपस्थिति

प्रो० पी० एल० भटनागर, कुलपति (अध्यक्ष)

- |                             |   |
|-----------------------------|---|
| 2. श्री ए. एन. सेक्सेना     | 3. श्री ए. एल. यादव                             |
| 4. डा. बी. एन. कंसल         | 5. प्रो. बी. डी. टिकीवाल                        |
| 6. प्रो. बी. एल. सराफ       | 7. श्री भंवरलाल शर्मा                           |
| 8. डा. बी. त्यागी           | 9. डा. डी. कुमार                                |
| 10. श्री डी. सी. स्वामी     | 11. डा. जी. सी. पाण्डे                          |
| 12. डा. जी. एस. शर्मा       | 13. डा. जी. सी. पाटनी                           |
| 14. श्री जी. एन. शर्मा      | 15. डा. जी. नारायणन्                            |
| 16. डा. इन्द्र पाल          | 17. मिसेज जय लक्ष्मी द्रविड                     |
| 18. श्री. जे. एन. टंडन      | 19. श्री के. एल. वोरडिया                        |
| 20. डा. के. एस. माथुर       | 21. श्री के. एल. वर्मा                          |
| 22. श्री के. सी. वाकीवाला   | 23. डा. के. सी. खन्ना                           |
| 24. श्री एल. एल. जोशी       | 25. डा. एम. सी. सिंघल                           |
| 26. श्री एम. एल. अग्रवाल    | 27. डा. एम. एल. मिश्रा                          |
| 28. श्री एम. एम. वर्मा      | 29. डा. एम. डबल्यू चौधरी                        |
| 30. श्री एम. ए. जेदी        | 31. श्री एन. एन. गिदवाणी                        |
| 32. प्रो. पी. एल. मार्गव    | 33. श्री पी. एल. चौधरी                          |
| 34. प्रो. पी. एस. सुन्दरम्  | 35. डा. पी. एन. श्रीवास्तव                      |
| 36. डा. पी. एन. माथुर       | 37. डा. राजकृष्णा                               |
| 38. मिसेज रमा कोचर          | 39. डा. आर. सी. दास                             |
| 40. प्रो. आर. सी. महरोत्रा  | 41. डा. सरनाम सिंह                              |
| 42. डा. आर. जी. सरीन        | 43. श्री एस. पी. व्यास                          |
| 44. डा. एस. पी. वर्मा       | 45. मिसेज एस. भारतीया                           |
| 46. श्री एस. एन. श्रीवास्तव | 47. श्री एस. सी. तिला                           |
| 48. श्री ताराचन्द शर्मा     | 49. प्रो. टी. के. एन. यूनीयान                   |
| 50. श्री टी. एल. दशोरा      | 51. श्री यू. एस. गौड़                           |
| 52. प्रो. जियाउद्दीन खां    | 53. श्री एल. पी. वैश्य, कार्यवाहक<br>रजिस्ट्रार |

विश्वविद्यालय के भूतपूर्व कुलपति (वाइस चैंसलर) प्रो० जी० सी० चटर्जी के निवन पर सीनेट के सदस्यों ने खेद प्रकट किया और एक मिनट के लिए मौन खड़े होकर दिवंगत आत्मा को श्रद्धांजली अर्पित की ।

सीनेट की कार्यवाही आरम्भ होने के पूर्व कुलपति (वाइस चांसलर) महोदय ने सीनेट को यह जानकारी दी की अभी कुछ ही देर पहले उन्होंने सिन्डीकेट की अत्यावश्यक बैठक बुलाई थी और उनके सम्मुख अपने विषय में कुछ तथ्य प्रस्तुत किए थे जो इस प्रकार हैं—

“गत 30 जनवरी, 1971 को जब विश्वविद्यालय में वातावरण पूर्णतया शांतिमय लगता था मैंने कुलाधिपति (चांसलर) महोदय के सम्मुख लिखित में निवेदन किया कि अपने स्वास्थ्य के लगातार गिरते जाने तथा अध्ययन-शौच के कार्य के लिए किंचित भी समय न मिलने के कारण मुझे कुलपति के पद से निवृत्त कर दिया जावे । काफी विचार विमर्श के पश्चात् कल सांयकाल लिखित में कुलाधिपति महोदय की मेरी प्रार्थना पर स्वीकृति प्राप्त हो गयी । अतः आज प्रातःकाल 10.15 बजे मैंने यह सूचना सिन्डीकेट के सम्मुख रखी थी ।

अब यही सूचना आप लोगों के सम्मुख निवेदन कर रहा हूँ । इसके साथ ही साथ मैं आप सब सदस्यों को हृदय से धन्यवाद देता हूँ और कृतज्ञता प्रगट करता हूँ कि आप लोगों ने मुझे अपने कार्य के संचालन में पूरा पूरा सहयोग दिया । जो कुछ कार्य ठीक हुए हैं वे सिन्डीकेट, एकेडेमिक कांसिल तथा सीनेट के सदस्यों की सहायता तथा विचारपूर्ण मत प्रकाशन के कारण ही सम्भव हुए हैं । जो कुछ त्रुटियाँ हुई हैं उनका सम्पूर्ण उत्तरदायित्व मेरा स्वयं का है । अतः आपसे नम्रता पूर्वक निवेदन है कि आप उन्हें क्षमा करेंगे ।

मेरी समस्त शुभकामनाएं इस विश्वविद्यालय की द्रुतगतिसे प्रगति के लिए हैं और मुझे पूर्ण विश्वास है कि आप सब लोगों के सहयोग से यह विश्वविद्यालय सतत् उन्नति के पथ पर अग्रसर रहेगा” ।

इस संबंध में सीनेट ने सर्वसम्मति से निम्नलिखित प्रस्ताव पारित किया—

“सीनेट की यह सभा डा० प्रभुलाल भटनागर के दो वर्षों के कुलपति के कार्यकाल में उनके द्वारा विश्वविद्यालय के वैश्वगिक जीवन को



ऊँचा उठाने तथा राजस्थान में उच्च शिक्षा के कार्य को आगे बढ़ाने की दिशा में किए गए सराहनीय कार्यों के प्रति गहरी प्रशंसा की भावना व्यक्त करती है और उनके दीर्घ एवं सफल शैक्षिक जीवन के लिए अपनी शुभकामनाएं अर्पित करती हैं” ।

1. सीनेट ने दिनांक 21 मार्च, 1970 की वार्षिक कार्यवाही विवरण की पुष्टि की ।

2. राजस्थान विश्वविद्यालय अधिनियम की धारा 20 (सी) तथा परिनियम 22 (1) के अन्तर्गत विश्वविद्यालय की सन् 1969-70 (जुलाई 1969 से जून 1970 तक) की वार्षिक रिपोर्ट प्रस्तुत की गई ।

निश्चय किया कि वार्षिक रिपोर्ट पर विचार विमर्श आगामी बैठक के लिए स्थगित कर दिया जावे ।

3. राजस्थान विश्वविद्यालय अधिनियम की धारा 20 (सी) तथा परिनियम 22 (1) के अन्तर्गत विश्वविद्यालय के वित्तीय वर्ष 1969-70 के वार्षिक लेख, स्थिति विवरण तथा अंकेक्षण प्रतिवेदन प्रस्तुत किए गए ।

निश्चय किया कि उपर्युक्त वार्षिक लेखों, स्थिति विवरण तथा अंकेक्षण प्रतिवेदन पर विचार विमर्श आगामी बैठक के लिए स्थगित कर दिया जावे ।

4. राजस्थान विश्वविद्यालय अधिनियम की धारा 20 (सी) तथा परिनियम 22 (3) के अन्तर्गत विश्वविद्यालय के (क) वित्तीय वर्ष 1971-72 के आय व्ययक अनुमान तथा (ख) वित्तीय वर्ष 1970-71 के पुनरीक्षित अनुमान प्रस्तुत किए गये ।

निश्चय किया कि उपर्युक्त अनुमानों पर विचार विमर्श (Discussions) आगामी बैठक के लिए स्थगित कर दिया जावे ।

इस संबंध में यह भी निश्चय हुआ कि सीनेट की आगामी बैठक नये कुलपति के पद संभालने के दो माह के भीतर बुलाई जावे ताकि वज्रत तथा इस बैठक में स्थगित किए गए अन्य आइटमों पर विचार विमर्श किया जा सके ।

5. कुलसचिव ने प्रतिवेदन किया कि कुलाधिपति महोदय के सचिव ने अपने पत्र सं० 1972 दिनांक 10-4-1970 के द्वारा यह सूचित किया कि विश्वविद्यालय की हैडबुक के परिनियम सं० 20, 26, 40,

40 ए, 41, 121 एवं 123 में सीनेट द्वारा दिनांक 21 मार्च, 1970 को पारित किए गए संशोधनों पर कुलाधिपति महोदय ने अपनी अनुमति प्रदान करदी है ।

निश्चय किया कि उपरोक्त प्रतिवेदन को अभिलिखित किया जावे ।

6. कुलसचिव ने प्रतिवेदन किया कि कुलपति महोदय ने दिनांक 19-12-1970 को निम्नलिखित आदेश दिये :—

(I) “In the circumstances stated below I, acting under the powers vested in me as the Vice-Chancellor of University vide section 13 (4) of the University Act, have declared in the Convocation Pandal that the Research and Post-graduate Degrees, Diplomas and other distinctions which were to be conferred at today's Convocation shall be deemed to have been duly conferred :

(1) Supplication for all Degrees/Diplomas was, in terms of the provisions contained in S. 104 read with O. 123J, duly done at the meeting of the Senate held on 18. 12 1970;

(2) All arrangements for holding the University Convocation today had been made. The Degrees and Diplomas were supplied to the recipients by 1.30 p.m. Most of the members of the Senate and the Syndicate were present. However, the Convocation could not be held in the the usual ceremonial way in accordance with the procedure laid down in the Statutes and Ordinances because a section of the students demanding [conferment of the LL.B. Degree in the 'University Convocation' itself (intead of First Degree Convocation) created an unfavourable situation;

(3) A large number of guests and recipients of degrees who had assembled in the Pandal were growing impatient and naturally they could not wait indefinitely as it had already

become late in the afternoon and there was no possibility of the situation improving”.

- (II) “The ‘University Convocation’ could not be held this afternoon due to an ugly situation created by a section of the students demanding conferment of the LL.B. degree in the ‘University Convocation’ itself (instead of First Degree Convocation). I have reported and reasons to believe that there is a potential threat for a similar situation developing tomorrow also when the ‘First Degree convocation’ for the University Teaching wing is scheduled to be held. Therefore, acting under the emergency Powers vested in me vide Section 13(4) of the University Act, I have decided that the ‘First Degree convocation’ be cancelled. However, the Degrees be supplied to the candidates during hours already fixed for the purpose and the same shall be deemed to have been duly conferred.

निश्चय किया गया कि उपरोक्त प्रतिवेदन को अभिलिखित किया जावे ।

7. राजस्थान विश्वविद्यालय के अधिनियम की धारा 20 ए के अन्तर्गत सिन्डीकेट द्वारा प्रस्तावित परिनियमों में परिवर्तन । संशोधन पर सीनेट ने विचार किया (जो परिशिष्ट I में उल्लेखित है ) ।

निश्चय किया कि परिनियम सं० 42 ई जो कार्यालय की असावधानी से परिशिष्ट में आ गया है उसको छोड़कर बाकी परिनियमों के परिवर्तन संशोधन को स्वीकृत किया जावे ।

8. राजस्थान विश्वविद्यालय अधिनियम की धारा 20 (बी) के अन्तर्गत सिन्डीकेट द्वारा प्रस्तावित अध्यादेशों में परिवर्तन । परिवर्तन । संशोधन पर सीनेट ने विचार-विमर्श करना आगामी बैठक के लिए स्थगित कर दिया ।

9. श्री राजेन्द्र जोशी (सीनेट सदस्य), लेक्चरर, विश्वविद्यालय इतिहास विभाग, जयपुर ने अपने पत्र दिनांक 22-1-1971 के द्वारा निम्नलिखित प्रस्ताव भेजे थे, परन्तु उन्होंने बैठक में उनको वापिस ले लिया ।

1. पिछले दो वर्षों में विश्वविद्यालय के प्रत्येक क्षेत्र में जो गिरावट आई है उसके प्रति सीनेट असन्तोष व्यक्त करती है ।

2. विश्वविद्यालय के अधिनियम के अनुसार दीक्षान्त समारोह का होना आवश्यक है। इस आवश्यकता की पूर्ति की जाय।
3. विश्वविद्यालय के वित्तीय प्रशासन व नियुक्तियों में अनियमितताओं की जाँच के लिए सीनेट एक जाँच समिति की नियुक्ति करती है।
4. सिन्डीकेट ने अपनी जिम्मेदारियों व कर्तव्यों के पूर्ति उदासीनता दिखलाई है उसके प्रति सीनेट अपना असन्तोष व्यक्त करती है।

10. सीनेट के 25 सदस्यों ने अपने पत्र दिनांक 5-1-1971 के द्वारा निम्नलिखित मुद्दे विचार विमर्श के लिए भेजे थे, परन्तु बैठक में वापस ले लिये गये :—

1. हाल ही में हुई विद्यार्थियों की हड़ताल एवं उसके दौरान अधिकारियों का रवैया।
2. रु० 25) जमा कराने पर कापीज की पुनः परीक्षा की व्यवस्था परिचालन करने के विषय में विचार।
3. प्रवेश की अन्तिम तिथि बढ़ाने पर विचार।
4. विश्वविद्यालय में रिटायर्ड आर्मी परसोनल को किस उद्देश्य से सेवा में रखा गया है।

5. अन्य विषय।

11. राजस्थान विश्वविद्यालय अधिनियम बारा 20 (ए) के अन्तर्गत सिन्डीकेट की बैठक दिनांक 10 मार्च 1971 में पारित संशोधन पर सीनेट ने विचार विमर्श किया ( जो परिशिष्ट II में उल्लेखित हैं)।

निश्चय किया कि :—

- (क) परिनियम सं० 90 ए तथा 95 पर विचार-विमर्श स्वगित किया जावे।
- (ख) परिनियम सं० 126 के क्लॉज (डी) को पारित नहीं किया जावे क्योंकि बैठक में कुलसचिव द्वारा यह सूचना दी गई कि शिक्षा शास्त्री परीक्षाओं को ऐकेडेमिक कौंसिल ने अपने निर्णय

सं० 24 (IV) दिनांक 13-2-1971 तथा सिन्डीकेट के अपने निर्णय सं० 20 दिनांक 10-3-1971 के द्वारा संसूचित संकाय से हटा कर शिक्षा संकाय के अन्तर्गत रख दिया है जिसके फलस्वरूप इस क्लॉज (डी) की कोई आवश्यकता नहीं रही है।

(ग) इस परिशिष्ट में उल्लेखित परिनियमों में अन्य सभी परिवर्तन संशोधन स्वीकृत किए जावें।

12. कुलमंचिब ने प्रतिवेदन किया कि सीनेट संख्या 10 दिनांक 21 मार्च, 1970 के सन्दर्भ में, जिसके द्वारा सिन्डीकेट के निश्चय संख्या 23 दिनांक 5 फरवरी, 1970 की श्री शम्भू गिरी गोस्वामी आत्मज श्री नगवान गिरी गोस्वामी को बी० ए० उपाधि वापस लेने की संस्तुति पर, एल० एन० टीचर्स ट्रेनिंग कालेज, डबोक के प्रिंसिपल के पत्र दिनांक 20 मार्च, 1970 की सूचनाओं की रोजनी में पुनः विचार किये जाने को कहा गया था, निम्न-लिखित कार्यवाही की गई :—

1. विश्वविद्यालय के कानूनी सलाहकार व मामले की जांच के लिये नियुक्त जांच अधिकारी को निर्देशित किया गया कि वे प्रिंसिपल के पत्र से प्राप्त सूचनाओं की रोजनी में मामले की पुनः जांच करें।
2. दोनों ही अपनी पूर्वा संस्तुति से परिवर्तन करने को कोई कारण नहीं प्राप्त कर सके।
3. 4 जुलाई, 1970 की बैठक में सिन्डीकेट ने जांच अधिकारी और कानूनी सलाहकार की रिपोर्ट पर विचार करने के बाद अपने निश्चय सं० 25 द्वारा निर्णय किया कि सीनेट को फिर संस्तुति की जावे कि मामले की लिखित स्थिति को देखते हुए श्री गोस्वामी की बी० ए० उपाधि विश्वविद्यालय हैंड बुक खण्ड 2 के परिनियम सं० 15 के अन्तर्गत वापस ले ली जावे।

निश्चय किया कि उपर्युक्त विषय पर विचार विमर्श आगामी बैठक के लिए स्थगित कर दिया जावे।

बैठक की कार्यवाही अध्यक्ष महोदय को धन्यवाद देने के पश्चात् उपरान्त 4-30 बजे समाप्त हुई।

ह० पी० एल० भटनागर  
कुलपति

ह० एल० पी० वैश्य  
कुलसचिव

## परिशिष्ट 'क'

I. (*Vide Syndicate Res. No. 36 dated 11-4-70*)

A. In S. 39 : ( i ) Delete 'M. Pharm'.  
( ii ) Delete 'LL. B. and substitute 'LL. B.'  
(Academic) and 'LL.B. (Professional)'.

B. In S. 40 : The word 'Hindi' within parenthesis be put up against the following Diplomas :

1. Textual Criticism.
2. Folkloristics, and
3. Linguistics.

C. In S. 42 E: The following new Statute No. S. 42E be incorporated in the University Hand Book Part II.

1. There shall be a Post-graduate Medical Education and research Committee which will be constituted by the Board of Studies in Medicine for a period of 3 years from the Heads of the Post-graduate Departments in the affiliated Colleges.
2. The Committee will consist of one Member of each of the specialities in the Faculty of Medicine in which Post-graduate Degree and/or Diploma is awarded. As far as possible all the affiliated Post-graduate Colleges will be fairly represented.
3. The Post-graduate Medical Education and Research Committee shall have a Convener appointed by itself in the following order of preference from among its Members :—
  - ( i ) Principals of Post-graduate Colleges being Heads of Post-graduate Departments.
  - (ii ) Heads of Post-graduate Departments.
4. The functions of the Post-graduate Medical Education and Research Committee shall be :—
  - ( i ) To recommended courses of study, Curricula and Scheme of examination, qualifications of teachers and examiners for Post-graduate Degrees and Diplomas in the specialities in the

Faculty of Medicine and to advice on all matters relating thereto referred to them by the Syndicate or Academic Council or Faculty of Medicine or Board of Studies.

- (ii) The Post-graduate Medical Education and Research Committee may bring to the notice of the Faculty of Medicine or Academic Council or Syndicate matters connected with examinations in the subjects or specialities and may also address to the Board of Studies in medicine on any matters with the improvement in the courses therein; and

**D. In S. 97(b):** Foot note No. 1 of the Statute be amended as follows :

“Two or more Colleges situated at the same or a neighbouring place may hold a joint First Degree Convocation under intimation to the University.”

**E. In S. 121 :** ( i ) The word ‘Hindi’ within parenthesis be put up against the following Diplomas :

1. Textual Criticism,
2. Folkloristics, and
3. Linguistics.

(ii) Substitute the following examination Fees :

For the 1st Year LL. B. (A/P) Exam.....  
Rs. 26/—

For the 2nd Year LL. B. (A/P) Exam.....  
Rs. 38/—

For the 3rd Year LL. B. (A/P) Exam.....  
Rs. 53/—

(iii) Delete ‘M. Pharm’ and/or ‘M. Pharm Pt. I and Part II Examination’ wherever occurring.

**F. In S. 123 :** The word ‘Hindi’ within parenthesis be put up against the following Diplomas :

1. Textual Criticism.
2. Folkloristics, and
3. Linguistics.

*II (Vide Syndicate Res. No. 36 dated 16.5.70)*

A. In S. 40 : ( i ) Substitute 'Post M. A. Diploma in Linguistics (Hindi/English)' for 'Post M. A. Diploma in Linguistics (Hindi)'.

(ii) Add the following at the appropriate place :

1. Cooperation.
2. Banking and Finance.

B. In S. 121 : ( i ) The examination fee of Rs. 40/- per candidate for the Diploma in Adult Education Examination and Rs. 26/- for Certificate in Literacy Training given at present under the heading Faculty of Arts be deleted and instead the fee for Diploma in Adult Education Examination and the examination for the Certificate Course in Literacy training be mentioned under the heading Faculty of Education.

(ii) Add the following under the heading 'Faculty of Arts'.

Post M.A. Diploma in Linguistics (English)  
.....Rs. 40/—

(iii) Add the following under the heading Faculty of Commerce.

1. Diploma in Cooperation.....Rs. 40/—
2. Diploma in Banking and Finance.....Rs. 40/—

C. In S. 123 : ( i ) Substitute 'Linguistics (Hindi/English)' for 'Linguistics (Hindi)'.

(ii) Add under para 'B' "Diploma in Cooperation/Banking and Finance".

*III. (Vide Syndicate Res. No. 20 dated 7.11.70)*

In S. 26 : Add the following note under clauses (2) and (5) :—

“N. B. :— The term of office of the University nominee shall be three academic years and a person once appointed shall be eligible for re-nomination.”

*IV. (Vide Syndicate Res. No. 27 dated 14.12.70)*

In S.37A(1)(b):The following note be added :—

“N. B. :— In exceptional circumstances retired persons who have held the above position may be appointed.”



## ANNEXTURE II

## परिशिष्ट (ब)

I. (Vide Syndicate Resolution No. 36 dated 11-4-1970)

(1) *O.278 E*

Read : "1st Janunry to 31st December" in place of "July to June" in the last sentence in Note No. 3 given under the Ordinance.

(2) *O.50* : Delete at S. No. 6 'Master of Pharmacy (M. Pharm) and re-number the rest.

(3) *O.299 A to O.299 H* : Omit these Ordinances regarding M. Pharm.

(4) *O.329 No. 3* : Reworded so as to read as follows :

"*O.329 N-3*" A candidate who after passing the Upadhyaya examination with English of the Board of Secondary Education, Rajasthan or the Pre-University Examination of the University or an examination recognised by the University as equivalent there to has, attended a regular course of study in an affiliated Ayurvedic College for one academic year shall be eligible for admission to the Pre-Ayurvedic Examination."

*N.B.* : A candidate who passes the Upadhyaya Examination or the Pre-University or equivalent examination with Sanskrit as one of the optional subjects will be exempted from appearing in the subject as Sanskrit prescribed for the Pre-Ayurvedic Examination. Similarly, a candidate who passes the Pre-University or an equivalent examination with Science subjects will be exempted from appearing at the Science subjects prescribed for the Pre-Ayurvedic Examination."

(5) *O.45* : Under the heading 'Diplomas' substitute 'Post M.A. Diploma in Linguistics (Hindi/English)' for 'Post-M.A. Diploma in Linguistics (Hindi).'

- (6) Add the following new O.215E-6 :

*Post M.A. Diploma in Linguistics (English)*

A candidate who after passing the Master's degree examination in English of this University or of any other statutory Indian University recognised for the purpose by the Syndicate, has completed a regular course of study for one academic year shall be admitted to the examination for the post M.A. Diploma in Linguistics (English).

- (7) O.65-I Add the following :

“For teachers of Post M.A. Diploma in Linguistics (English) :

(a) Post-graduate Diploma in the Teaching of English or in English studies of the Central Institute of English, Hyderabad or of any other recognised Indian or foreign University.

(b) M.A. in Linguistics from an Indian or foreign University.

- (8) O.329N-11 (c) be reworded so as to read as follows :  
O.329N-11 (c)—A candidate who after passing the First Ayurvedacharya Examination of the University has attended a regular course of study for 3 years prescribed for the Final Ayurveda/Acharya examination and has passed the Second Ayurvedacharya Examination of the University earlier shall be eligible for appearing at the Final Ayurvedacharya Examination.

- (9) O.299 (c) The word ‘separately’ be added at the end of para (1) of Ordinance.

- (10) O.278A : The first and second para of O.278 A be read as under, the rest will be the same :  
D.Sc. (Medicine)  
Ph.D. (Medicine)

- (11) In O.278 B : Para I (A) of O.278 B be reworded so as to read as under :

A House Physician/House Surgeon in a teaching hospital recognised by the Uni-

versity or any other hospital approved by the Syndicate for the purpose for a period of 12 months in Medical/Surgical/ Gynaec. & Obst./Paediatrics/Ophthalmic/ Ear, Nose and Throat/Orthopaedic wards or Anaesthesia or Radiology Department Corresponding to the Post-graduate Degree of M.D. and M.S. in the main subject or its specialities : In case of subjects of Preventive & Social Medicine, Pathology and Microbiology : Pharmacology and Experimental Therapeutics; Physiology; Biochemistry and Anatomy, the candidate may hold teaching and or research appointment in the respective subject in place of 12 months House Physician/Surgeonship. Forensic Medicine will be considered as a speciality of Medicine and Pathology.

- (12) *O.278E* : Note 3 under *O.278 E* be reworded so as to read as under :—

Professor/Additional Professor/Associate Professor with two teachers having Post-graduate qualifications attached to his Unit will register 3 Post-graduates per year. A Reader having independent unit will register only two post-graduates per year. A Reader who is working in a Professor's Unit will ordinarily be not permitted to register a postgraduate independently. However, if the Professor of the Unit considers that in a particular subject a Reader can guide a post graduate satisfactorily, he may allow a postgraduate to register under the Reader, but this will be from the quota fixed for his Unit. In those units where staff is adequate and research facilities are available the Head of the Institution on the recommendation of the Head of the Department concerned may permit registration of one or two extra post-graduates. A year for this purpose will be from July to June.

- (13) *In O.278F* The first 4 lines of the Second Para of Note under Ordinance 278 F be reworded as under :—

The candidate will undertake the postgraduate training for two academic years as a full time postgraduate in the department concerned or as an insertive trainee in the discipline concerned at the recognised institution

- (14) *O.278-Y-8* : Existing note under this ordinance be deleted.
- (15) *O.278-B-2* : and *O.278 E-3* Add The Word "Academic" before the word 'year' wherever occurring in Ordinances.

## (16) O.65-VII :

## O.65 VII : FACULTY OF MEDICINE, PHARM. AND VET. SCIENCE

Add the following new qualifications after Demonstrator in Physiology.

## PSYCHOLOGY

Reader	M.Sc./Ph.D./D.Sc./M.D. (Physiology)/ Pharmacology/P.S.M. with thesis in Psychology.	Or	3 years in the subject of which 2 years should be after Post-graduation and of this one year must be as Lecturer in the subject in a medical College.
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M.B., B.S. with 2 years D.P.M. or  
Ph.D./D.Sc. (Psychology).

Asstt.  
Prof./  
Lecturer.

-do-

Two years as Demonstrator/Tutor in  
Physiology/Psychology in a Medical  
College or any other college.

Tutor/  
Demonstrator

M.B., B.S. or M.Sc. in Physiology  
or Master's degree in Psychology.

Under clause A of Ordinance 65 (vii), the following changes be incorporated :

(a) Para 4 be replaced by the following :—

50% of the time spent in recognised research under the Indian Council of Medical Research or a University or a Medical College, after obtaining the requisite Post-graduate qualification be counted towards teaching experience for the post of Lecturer in the same or in allied subject provided that 50% of the teaching experience shall be the regular teaching experience.

(b) Para 6 be replaced by the following :

In case of specialities under Medicine and Surgery the qualifications and experience should also be as scheduled below but in case the post has been advertised and suitable candidates are not available, the qualifications can be relaxed.

(c) The qualifications of the following posts be changed as under :-

<i>Post</i>	<i>Subject</i>	<i>Academic qualifications</i>	<i>Teaching Experience.</i>
Asstt. Prof./ Lecturer.	Paediatrics	M.D. (Paediatrics). Speciality Board of Paediatrics (USA) MD/MRCP FRCP/FRFPS (P) Glasgow (with Paediatrics as a special subject or with D.C.A.) or equivalent qualification.	At least two years teaching in the subject as a clinical tutor/Registrar in a Medical College of which at least one year must be after post-graduation.
Asstt. Prof./ Lecturer.	Orthopaedics.	M.S. (Ortho.) M.Ch. (Ortho.) speciality Board of Orthopaedic Surgery (USA) M.S. (FRCS/FRFPS (S) Glasgow with diploma in Orthopaedics or equivalent qualification.	-do-
Asstt. Prof./ Lecturer.	E.N.T.	M.S. (E.N.T.) Speciality Board of Oto-Rhino-Laryngology (USA), FRCS/MS/FRFPS (S) Glasgow with D.L.O. or equivalent qualification.	-do-
Asstt. Prof./ Lecturer.	Ophthalmology.	M. S. (Ophthalmology) Speciality Board of Ophthalmology (USA) M.S./FRCS/FRFPS (S) Glasgow with D.O. or D.O.M.S. or equivalent qualification.	-do-

As associated Professor, Reader Asstt. Prof. Lecturer in Dentistry for 5 years of these 5 years at least three years must be as Associate Prof. or Reader in a Medical College after requisite qualification.

3 years in the subject of which at least 2 years as Lecturer in a Medical College after requisite qualification.

At least 2 years teaching in the subject as a clinical Tutor/Registrar in a Medical College.

As Associate Prof., Reader, Asstt. Prof. Lecture in Psychiatry for 5 years in a Medical college after requisite Post-graduate qualifications; of these 5 years at least 3 years must be as Associate Prof./Reader.

M.D.S./F.D.S. Preferably with M.B., B.S.

B.D.S., Preferably with M.B., B.S.

M.D. (Psychiatry), Speciality Board of Psychiatry and Neurology (USA) M.D./MRCP/FRCP—FRFPS (P) Glasgow (with psychiatry as a special subject or with D.P.M.).

Or

D.P.M. of any recognised University or Institution in India with 2 years course of equivalent qualification.

Professor Dentistry

Reader -do-

Asstt. Prof./ Lecturer. -do-

Professor Psychiatry.



Associate Professor	do	do	As Reader, Asstt. Prof. Lecturer in <i>Psychiatry for three years in a Medical College after requisite Post-graduate qualification of three years at least two years must be as Reader.</i>
Reader	do	do	Three years in the subject of which at least 2 years must be as Lecturer in a Medical College after Post-graduation.
Asstt. Prof./ Lecturer,	do	do	Two years in the subject as Clinical Tutor/Registrar in a Medical College of which at least one year must be after post-graduation.

(17) O.115 (b) The following Rule No. (3) be added to Ordinance.

“A candidate for the award of Scholarship for the final year M.B., B.S. Examination shall get himself registered as a Post-graduate student within two years of the completion of Internship training.”

(18) O.267 (d) be amended so as to read as under :—

“The M.B., B.S. degree shall be conferred after passing the Final Year M.B., B.S. Examination and after a candidate has undergone Compulsory rotating housemanship for a period of 12 months.”

(19) O.329-L-67 : It be re-worded so as to read as follows :—

“The subject for the Examination shall be as follows :

1. Principles, Methods and Historical Background of Adult Education.
2. Psychological and Sociological Background of Adult Education-
3. Planning, organisation and Administration of Adult Education.
4. Adult Literarcy.”

(20) O.323 Add at serial No. 9 and 10.

“Education of Handicapped” and “Moral Education.”

(21) O.329 L-50 Add the following new clause (b) and re-number the existing clause (b) as No. (c).

- (b) A candidate who has graduated with two, school subjects, possesses 10 years “experience of teaching in a recognised Secondary School, crossed the age of 45 years at the time of his admission to the Summer School-Cum-Correspondence Course and has completed a training for 14 months may be admitted to the examination for the Bachelor of Education degree.”

(22) O.65 (v) (A) be reworded so as to read as follows :

(i) *For Teachers for Education Degree classes :—*

The same qualifications as are prescribed for the teachers of the degree and Post-graduate classes in the Faculties of Arts and Science plus at least a Second class B.T. or B.Ed. or L.T. with an experience of teaching for two years in a Secondary School/Teacher's Training School/Teacher's Training College, after acquiring the B.T./B.Ed./L.T. degree;

Or

A first class or a Second class M.Ed. with an experience of teaching for two years in a Secondary School/Teacher's Training School/Teachers Training College, after acquiring the first degree in Education.

Note : (a) A teachers Teaching the Compulsory subjects under the paper 'Principles and Methods of teaching School Subjects' of the B.Ed. Exam. should possess, in addition to the qualification prescribed above, one of the following qualification also :—

(i) At least a Second Class Master's Degree in the subject.

and (ii) the teachers should have offered the subject as a teaching subject at the B.Ed. level.

(b) As far as possible, teaching of the subjects of specialisation be entrusted to those who are reasonably aequipped to teach those subjects. A person possessing a Master's degree and also a Degree or Diploma in Library Science with an experience of three years work in a Teacher's Training College Library shall be considered as qualified to teach the subjects of "School Library Organisation" under the special course subjects provided for the B.Ed. Examination.

(c) A person who is a graduate in Science/Arts/Commerce with a Diploma or

degree in 'Craft' of two Years Course of L.T. (Constructive) shall be considered qualified for teaching 'Craft'.

- (d) Candidates possessing the degree of "Bachelor of Education (Craft)" of the University will be considered eligible for teaching Craft.
- (e) Candidates having passed the three Year Diploma Course in Craft will be considered eligible for appointment as Junior Teachers for Teaching Craft.
- (f) Candidates having passed their High School Examination and possessing one year's Certificate in craft from a recognised Institution will be considered eligible for appointment as Workshop Assistants.
- (g) Candidates possessing B.Sc. (Ag.) degree with teaching experience in High School/ Higher Secondary/Training School may be considered qualified to work as Agriculture Teachers in the Teacher's Training Colleges.
- (h) A person who is a graduate and has passed the examination with Drawing and painting as one of his optional subjects and has also passed the B. Ed. examination of this University or of a recognised University shall be considered qualified for teaching 'Arts.'
- (i) A teacher for teaching Social studies should possess either (a) his Master's degree in History or political Science and B.A. with Economics or Geography or Sociology or Education, or (b) his Master's degree in Economics, or Geography or Sociology and B. A. with History or political Science.

*(II) For Teachers of Education post-graduate classes:*

A First Class Master's degree in Education or a Second class Master's Degree in Education with three years experience of teaching B. Ed. classes.

(III) *For Heads of Degree Departments :*

The same qualifications as mentioned above for teachers of degree classes plus five years experience of teaching B. Ed. and/or M. Ed. classes.

(IV) *For Heads of Post-graduate Departments :*

The same qualifications & experience as laid down above for the teachers of Post-graduate classes, plus additional teaching experience of B. Ed. and M. Ed. classes for five years, out of which at least three years should be of M. Ed. classes,

N.B. : Each college of Education shall appoint or designate five Heads of Departments, qualified as above, one each for the Departments defined under 0.51. A Post-graduate College may have Heads of Departments both for Post-graduate and degree levels as necessary under the conditions of affiliation the total number being 5.

(23) 0.302. be modified so as to read as follows :

0.302 The examination shall be conducted by means or written papers, practical and Viva-voce examination including sessional work done in the laboratories, drawing offices, workshops, factories and engineering works. The examinations in written papers shall be conducted as per details given below :

1. Mid-sessional Examination Approximately at the middle of the session.
2. Annual Examination At the end of the session.

The Annual Examination will be conducted by the University. The course for the examination will be the entire syllabus prescribed. It will carry 70% of the total marks allotted to the paper. The mid-sessional examination will carry 30% of the total marks allotted to the paper and the course for the mid-sessional examination will be the syllabus covered from the beginning of the session upto mid-sessional examination.

Note : The duration for the mid-sessional papers shall be same as for the Annual Examination.

(24) O.153 B : Be revised in a modified form so as to read as follows :

“Notwithstanding anything contained in these ordinances, if a candidate who after passing the first year/second year examination of the integrated course of the B. A./B. Sc./B. Com. LL. B. (A) LL. B. (P) examination or Part I/Part II of the Diploma in Cost and Works Accountancy Examination as the case may be, does not take the second year/Third Year/Part II/Part III examination in the immediately following two years, shall be required to re-appear at the First Year/Second Year/Part I/Part II examination, as the case may be, afresh according to the scheme of examination and syllabus prescribed for the said examination of the year in which he re-appears, before being permitted to appear at the next higher examination.

- (25) O. 48. : Under the Head ‘Degrees’ delete.  
“Bachelor of Laws (LL. B.)” and substitute the following :

“Bachelor of Laws (Academic (LL. B. (A).”

‘Bachelor of Laws (Professional) LL.B. (P).”

- (26) O.144.

Substitute : 66% in place of 75%, 75% in place of 85% and 70% in place of 80% wherever accepting in the said ordinance.

- (27) O. 164. : Be amended so as to read as follows :  
O.164 (4) The Principal of a College may by a certificate permit an ex-student, who joined his college and thereby forfeited his status as an ex-student to appear for an examination; provided that (i) he is satisfied with the candidate's conduct and progress and (ii) the student leaves the college by August 31, at the latest; provided that a student who appears and fails at the Supplementary Examination shall leave the College within 15 days from the date of declaration of his result of the Supplementary Examination.

- (28) O. 165 : The following amendment be made.  
in clause (i) of Ordinance 165, the existing proviso (b) be numbered as (c) and the following new proviso (b) be inserted.

- (b) "A candidate for the Second Year Examination of B. Com. may be allowed to change the optional subject last offered by him."

(29) O. 124. : The following sentences be added :—

"An Acharya degree holder of a Statutory Body may be considered as equivalent to an M. A. degree holder for the purpose of Ph. D. registration, after qualifying in the papers on (i) Vedic Literature and Elements of Comparative Philosophy and (ii) Literary and Cultural History of Ancient India, of (M. A. Sanskrit) Examination of the University."

## II. (*Vide Syndicate Res. No. 20 dated 16th May, 1970*)

Para (i) of 0.88 be reworded so as to read as follows :

"When a student has been guilty of grave misconduct or of persistent negligence of work the Principal of an affiliated college/Director of a University School or College/Head of the University teaching Department/Dean or Associate Dean of University Studies in Arts or Science ? Where he is studying may, according to the nature and gravity of the offence—

(a) expel for not less than a month,

(b) rusticate for a period not less than six months but not exceeding one academic year, or

(c) dis-qualify such a student from appearing at the next examination.

## III. (*Vide Syndicate Res. No. 36 dated 16.5.70*)

(1) Introduce new O.202-B as under :—

O. 202 B : "In addition to the optional subjects prescribed for the Second and the Final Year T. D. C. (Arts) Examinations, a candidate may, at his option, offer an 'additional optional paper' in General English each at the Second and the Final Year Examinations subject to the following conditions."

- (1) Only those candidates will be allowed to offer this additional optional paper at the Second

Year Examination who have already cleared the compulsory paper on General English prescribed for the First Year T. D. C. Examination either at the Main or at the immediately following Supplementary Examination.

- (2) Only those candidates will be allowed to offer the additional optional paper in General English at the Final Year T. D. C. Examination who have already cleared the additional optional paper in General English prescribed for the Second Year T. D. C. Examination either at the Main or at the immediately following Supplementary Examination.
- (3) Candidates who fail to clear the additional optional paper in General English at the Final Year T. D. C. (Main) Examination shall be given one chance only to clear the same at the immediately following Supplementary Examination.
- (4) An entry of having passed the additional optional paper in General English will be made in the Degrees of such candidates as have cleared both the additional optional papers viz., the one prescribed for the Second Year T. D. C. and the other for the Final Year T.D.C. Examination.
- (5) Candidates offering the additional optional paper will be required to put in the same minimum attendance as is prescribed for other subjects of the Second Year and the Final Year T.D.C. Examinations.
- (6) The pass percentage in the additional optional paper will also be the same as prescribed for other subjects.

Note:—"The result of the Additional Optional Paper in General English will not in any way effect the result of a candidate for the Second Year and/or the Final Year T.D.C (Arts)".

- (2) (a) O.329 L.10, O.329 L.12 and O.329 L.14 be re-written so as to read as follows :—



O.329 L-10 : A candidate who, after passing the First Year Examination of the B. Tech. Ed. Course of this University or any other statutory Indian University, has completed a regular course of study at the Regional College of Education, Ajmer or any other College affiliated to the University for the purpose for one academic year may be admitted to the Second Year Examination of the B. Tech. Ed. Course.

O.329 L-12 : A candidate who, after passing the Second Year Examination of the B.Tech.Ed. course of this University or any other statutory Indian University, has attended a regular course of study at the Regional College of Education, Ajmer or any other College affiliated to the University for the purpose for one academic year may be admitted to the Third Year examination of the B. Tech. Ed. Course.

O.329 L-14 : A candidate who, after passing the Third Year Examination of the B. Tech. Ed. course of this University or any other statutory Indian University, has attended a regular course of study at the Regional College of Education, Ajmer or any other college affiliated to the University for the purpose for one academic year may be admitted to the Fourth Year Examination of the B. Tech. Ed. courses.

(3) O.329 L-16, O.329 L-17 and O.238 E-11 be re-written so as to read as follows :—

O.329 L-16 : There shall be in the month of August a supplementary examination at the end of the First, Second, Third and Fourth Year Examinations of the B. Tech. Ed. Course. A candidate who fails at the main Examination shall be eligible to appear at the supplementary examination in the subject (s) in which he fails and he will be allowed admission to the next higher class. In case a candidate is not able to clear any subject (s) at the Supplementary examination, he will be given one more chance to clear the same alongwith the annual examination of the next higher class.

Candidates who fail in any one of the Practicals shall be declared to have failed in

the examinations as a whole and shall not be eligible for the Supplementary examination.

No division shall be awarded to the candidates declared successful at the Supplementary examination, for that year.

O.329 L-17: Candidates failing at the First, Second, Third and Fourth Year examinations of the B. Tech. Ed. Course in theory (external only) may present themselves for re-examination therein at the next annual examination without attending a regular course of study at the college concerned. No further chance will be allowed to them to clear the examination.

O.238 E-11: Candidates failing at the First, Second, Third and Fourth Year Examinations for the Bachelor of Science and Bachelor of Education degree in Theory (external) only may present themselves for re-examination, without attending a regular course of study at the college concerned.

(4) O 329 (D) be re-written so as to read as follows :—

A candidate who has passed the M.Ed. examination of this University or any other University recognised by the Syndicate, may be permitted to sit for the same examination in the remaining paper/papers of the area of specialisation already offered by him (without attending an affiliated College), or the papers of any other area of specialisation under Part I(B) provided he studies at a Post-graduate Teachers Training College affiliated to the University for at least three months and completes the required amount of Theoretical, practical and Sessional work if the area of specialisation which he wishes to offer is different from the one in which he submitted the dissertation when he passed the M. Ed. Examination.

(5) (i) *1st paragraph of O.130 may be modified so as to read as follows :—*

“Every accepted candidate shall pursue a course of research as a student of the University for not less than two years from the date of admission. If a candidate is unable to submit his/her thesis at the end of three years, he/she shall seek the permission of the Vice-Chancellor, for extension of time as

may be necessary, subject to the maximum of one year. No candidate shall be on Ph. D. rolls for more than four years after which the registration will automatically stand cancelled. After cancellation of registration, on the recommendation of the supervisor concerned, a candidate may be re-registered on payment of fresh fee. A candidate thus re-registered shall be required to submit his/her thesis within two years from the date of re-registration. In the case of teachers belonging to the University teaching Deptts./Colleges and affiliated colleges the maximum time for submission of thesis will be six years, and this period may, in special cases, be further extended by the Vice-Chancellor on the recommendation of the supervisor, upto the maximum of two years."

(ii) *O.138 (f) (1) may be modified so as to read as follows :*

"If two examiners have accepted the thesis, while the third has asked for its revision, the Vice-Chancellor, on the recommendation of the supervisor, shall either allow the candidate to revise the thesis or appoint a fourth examiner. If a fourth examiner is appointed his opinion shall be final."

(6) The existing Note No. (1) to O.200-B be re-written so as to read as :

"A candidate failing in any or all the compulsory subjects viz. General Hindi, General English and General Education/History of Indian Civilization & Culture in the First Year Examination will be allowed to continue his studies in the Second Year Class provided he passes in all the optional subjects offered in the First Year Examination. Such a candidate will have to clear the compulsory subjects in which he failed at the First Year Examination in the immediately following three (Main and Supplementary) examinations and will be allowed to join the Final Year class only after he has cleared all the compulsory subjects. If a candidate passes the Second Year Examination but again fails to clear the compulsory subject (s), his result of Second Year will be withheld and released only after he has passed in all the compulsory subjects. Such a candidate shall be allowed two further chances to clear the failing compulsory subject (s) at the immediately following Main and Supplementary examina-

tions and allowed admission to the Final Year T.D.C. Class, provided that if he fails to clear them even in these two chances (inability to avail a chance shall be treated as failure), his First Year and Second Year T. D. C. Examinations shall stand cancelled."

- (7) The existing note No.(4) to O.218 be rewritten so as to read as :

"A candidate failing in any or all the compulsory subjects viz. General Hindi, General English and General Education/History or Indian Civilization and Culture/Elementary Mathematics/Elementary Biology in the First Year Examination will be allowed to continue his studies in the Second Year Class provided he passes in all the optional subjects offered in the First Year Examination. Such a candidate will have to clear the compulsory subjects in which he failed at the First Year Examination in the immediately following three (Main and Supplementary) examination and will be allowed to join the Final Year class only after he has cleared all the compulsory subjects. If a candidate passes the Second Year Examination but again fails to clear the compulsory subjects (s) his result of Second Year will be withheld and released only after he has passed in all the Compulsory subjects. Such a candidate shall be allowed two further chances to clear the failing compulsory subject(s) at the immediately following Main and Supplementary examinations and allowed admission to the Final Year T. D. C. class, provided that if he fails to clear them even in these two chances (inability to avail a chance shall be treated as failure), his First Year and Second Year T. D. C. Examinations shall stand cancelled."

- (8) The existing Note No. (1) to O.241 be re written so as to read as :

"A candidate failing in any or all the compulsory subjects viz. General Hindi, General English and General Education/History of Indian Civilization and Culture in the First Year Examination will be allowed to continue his studies in the Second Year class, provided he passes in all the remaining subjects in the First Year examination. Such a candidate will have to clear the compulsory subjects in which he failed at the First Year Examination in

the immediately following three (Main and Supplementary) examinations and will be allowed to join the Final Year class only after he has cleared all the compulsory subjects. If a candidate passed the Second Year Examination but again fails to clear the compulsory subject (s), his result of Second Year will be with-held and released only after he has passed in all the compulsory subjects. Such a candidate shall be allowed two further chances to clear the failing compulsory subject(s) at the immediately following Main and Supplementary examinations and allowed admission to the Final Year T.D.C. class, provided that if he fails to clear them even in these two chances (inability to avail a chance shall be treated as failure) his First Year and Second Year T.D.C. Examinations shall stand cancelled."

- (9) The existing Note No. (3) to O.204 and O.222 in respect of admission to B.A. and B.Sc. Honours Courses respectively be rewritten so as to read as :

"Subject to his being otherwise eligible for admission to the Honours Course, a candidate passing in all the optional subjects but failing in any one or all the compulsory subjects in the First Year T.D.C. Examination of the University will be allowed admission to the Honours Part I Course. Such a candidate will have to clear the compulsory subject (s) in which he failed at the First Year Examination in the immediately following three (Main and Supplementary) examinations and will be allowed to join the Honours Part II class only after he has cleared all the compulsory subjects. If a candidate passes in the Honours Part I Examination but again fails to clear the compulsory subject(s) his result of the Honours Part I will be withheld and released only after he has passed in all the compulsory subjects. Such a candidate shall be allowed two further chances to clear the failing compulsory subject (s) at the immediately following (Main and Supplementary) Examination and allowed admission to the Honours Part II class, provided that if he fails to clear them even in these two chances (inability to avail a chance shall be treated as failure, his First Year and Honours Part I Examinations shall stand cancelled."

- (10) The existing Note appended to O.193 be re-written so as to read as :

“A candidate failing in one or more compulsory subjects prescribed for the First Year T. D. C. Examination in the Faculties of Arts, Science and Commerce will be allowed to reappear in the failing subject (s) at the Supplementary Examination subject to the conditions and limitations as prescribed in Ordinances 200E and 204 (Faculty of Arts), 218 and 222 (Faculty of Science) and 241 (Faculty of Commerce)”.

(11) The existing clauses Nos. 1, 4 (a) and 5 (i) of O.86 A be re-written so as to read as :—

1. He shall be required to pass in the Compulsory subjects prescribed for the First Year T. D. C. Examination of the University if he has not already passed in the same at the qualifying examination. If he passes the Second Year examination but fails to clear the compulsory subject(s) either at the main or at the immediately following Supplementary examination, his result of Second Year examination will be with-hld. Such a candidate shall be allowed two more chances to clear the failing compulsory subject (s) at the immediately following main and Supplementary examinations and allowed admission to the Final Year T.D.C. class, provided that if he fails to clear them even in these two chances (inability to avail a chance shall be treated as failure), his Second Year T.D.C. Examination shall stand cancelled.
- 4(a) Such a candidate shall be required to pass in Accountancy and Statistics (Elements of Statistics) prescribed for the First Year Examination of the Three Year Degree Course in Commerce in the immediately following year. He shall also be required to pass the compulsory subjects of General Hindi, General English and General Education/History of Indian Civilization and Culture prescribed for the First Year Examination of the Three Year Degree Course in Commerce, if he has not already passed the same at the qualifying examination. If he passes the Second Year Examination but fails to clear the aforesaid subject(s) either at the main or at the immediately following Supplementary examination, his result of Second Year Examination will be with-held. Such a candidate shall be allowed to more chances to clear the failing compulsory subject (s) of Gneneral Hindi, General English and General

Education/History of Indian Civilization and Culture at the immediately following Main and Supplementary examinations and allowed admission to the Final Year T.D.C. class, provided that if he fails to clear them even in these two chances (inability to avail a chance shall be treated as failure), his second year T.D.C. Examination shall stand cancelled.

- 5 (i) Candidates who appeared at the First Year T.D.C. examination of the University in the compulsory and optional subjects (including compulsory Commerce subjects in the case of Commerce Faculty) under the aforesaid provision shall not be promoted to the Final Year T.D.C. class until they have passed the First Year T. D. C. examination in the required compulsory/Optional subjects and (ii) the attendance of such candidates as passed in the required compulsory/optional subjects at the Supplementary Examination will be counted from the date of their admission but not later than a week from the date of declaration of the Supplementary Examination result.

- (12) (vii) The last paragraph of clause A of O.167 be re-written so as to read as :

“Such a candidate after passing the First Year Examination will be allowed to appear at the Second Year T. D. C. Arts Examination and after passing the Second Year T. D. C. (Arts) Examination at the Final Year T. D. C. (Arts) Examination, in the same Optional subjects in which he passed his First Year T.D.C. Examination. A candidate failing in any or all the compulsory subjects viz. General Hindi, General English and General Education/History of Indian Civilization and Culture in the First Year Examination will be allowed to continue his studies in the Second Year class provided he passes in the two optional subjects offered in the First Year Examination. Such a candidate will have to clear the compulsory subjects in which he failed at the First Year Examination in the immediately following three (Main and Supplementary) examinations and will be allowed to join the Final Year class only after he has cleared all the Compulsory subjects. If a candidate passes the Second Year Examination but again fails to clear the compulsory subject(s), his result of Second Year will be withheld and released only after he has passed in all the

compulsory subjects. Such a candidate shall be allowed two further chances to clear the failing compulsory subject(s) at the immediately following Main and Supplementary examinations and allowed admission to the Final Year T.D.C. class, provided that if he fails to clear them even in these two chances (inability to avail a chance shall be treated as failure), his First Year and Second Year T.D.C. Examinations shall stand cancelled. On being declared successful at the Final Year T.D.C. (Arts) Examination, he shall be awarded the Degree as awarded to regular B. A. candidate, without assigning any division and adding therein that he had passed the B.A. Examination under O.167."

- (13) O.193 be reworded so as to read as follows :

"O.193 : A candidate who (1) fails in (a) one optional subject only at the First Year, Second Year or Final Year Examination of B. A./B. Sc., B. Com. Pass Course or (b) in a subsidiary subject of the B.A./B. Sc. (Honours) Part I or Part II examination or (c) the Shastri Examination, and (2) who fails in one theory paper only at the Pre.University (Agr.) or the Pre-Professional (Ag.) Examination, or the First Year/Second Year/Final Year Examination of the B.Sc. (Agr.) obtaining not less than 20% marks in the paper and 40 percent marks in the aggregate of the whole examination (Theory and Practical) shall be eligible to re-appear in the subject at the Supplementary Examination to be held in the month of August following :

Provided that in the case of the B.A., B.Sc., and B. Com. Pass Course, B. A. (Hons.) and B. Sc. (Hons.) Examinations mentioned under (1) above, the candidate shall be required to appear only in the theoretical part of the subject if he has already the practical part at the Main Examination, or in the practical part only if he has already cleared the theoretical part at the Main Examination."

- (14) In O.141 B-clause (iii) of the qualification for post of Reader in Adult Education be reworded so as to read as follows :

(iii) "Five years experience of teaching at the University or a college and should have produced at least one Ph.D. in the field of education with bias for Adult Education."



(15) *O.136 (iv) reworded so as to read as follows :*

O.136 (iv) (a) "In the Faculty of Arts, the candidates may at their option submit their theses through the medium of Hindi or English, subject to the condition that the theses submitted in Hindi shall be accompanied with a synopsis prepared by the candidate in English language not exceeding 60 pages and similarly theses submitted in English shall be accompanied by a Synopsis prepared by the candidate in Hindi language not exceeding (50) pages.

(b) A thesis in the subject of Sanskrit or Urdu may be submitted in the same language or in Hindi or English provided that when it is submitted in the same language viz. Sanskrit or Urdu, as the case may be, it shall be accompanied by a synopsis prepared by the candidate in Hindi and also a short summary in English language not exceeding 10 pages and (ii) when it is submitted through Hindi medium it shall be accompanied by a synopsis in English not exceeding 50 pages prepared by the candidate, and Vice-Versa.'

(16) *O.132 (iii) be read as follows :*

"A No Dues Certificate duly signed by the Dean of the University Studies/Director of the School/College, Head of the Department Director of Libraries/the Hostel Warden concerned, shall be required to be submitted alongwith the thesis."

(17) *Clause (5) of O.332 be read as :*

"Five Post-graduate Heads, including Principals who are Post-graduate Heads of affiliated colleges and are recognised as Research supervisors, to be nominated by the Vice-Chancellor."

(18) *O.329-M-9 be deleted*

(19) *O. 329-M-10 be reworded so as to read as follows :*

"(i) A candidate who after passing the Upadhyaya Examination of the Board of Secondary Education, Rajasthan or an examination recognised by the University as equivalent thereto, has prosecuted a regular course of study prescribed for Shastri Part I examination for one

academic year in a recognised institution shall be admitted to Shastri Part I examination.”

- (ii) “A candidate who has passed Shastri Part I examination of the University and has prosecuted a regular course of study prescribed for the Shastri Part II examination for one academic year in a recognised institution shall be admitted to Shastri Part II examination of University.

20. O.322—M-13. The second paragraph relating to Acharya Part I examination be reworded so as to read as follows :—

“A candidate who has passed the Shastri Part II examination of the University or the Shastri examination conducted by the Registrar, Departmental Examinations, Rajasthan or an examination recognised as equivalent thereto and prosecuted a regular course of study for the Acharya Part I examination for one academic year in a recognised institutions shall be admitted to Acharya Part I Examination.

21. The word ‘Pariksha’ wherever occurring be substituted by the word ‘examination.’

22. O.86 & O.97 be amended so as to read as follows :—

- ( i ) O.86—The second sentence of the first paragraph of the Ordinance be reworded so as to read as follows:

“Application for such a certificate accompanied by a fee of rupees five and necessary qualifying certificate shall be made to the Registrar through the Principal of the College to which he is admitted on a printed form (obtainable from the college office) not later than the 31st July after which no admissions or re-admissions shall be made.”

- ( ii ) O.97—The first paragraph of the Ordinance be reworded so as to read as follows :

“The Principal of every affiliated college shall forward to the Registrar the name of every student admitted or re-admitted to that college.

No admission shall be made to an affiliated college after 31st July.”

23. O.252—be amended so as to read as under :

“O.252—A candidate who after taking the Bachelor's degree in Arts/Science/Commerce Medicine/Engineering/Agriculture of the University or of an Indian University recognised for the purpose by the Syndicate with full courses whether as a regular student or as a private or correspondence course student or done at one time or in parts prescribed for the degree and securing a minimum of 45 marks either in the aggregate marks prescribed for all the optional subjects or 48% in any one of the optional subjects offered by him at the degree examination, shall be admitted to the LL.B. First Year Course.

*N.B. :* (i) A concession of 5 marks in the total aggregate or in any one subject may be allowed by the Head of an Institution to a candidate under one or more of the following categories :

- (a) Women candidate,
- (b) Candidate who has attained high Proficiency in games/co-curricular activities, and
- (c) Candidate belonging to scheduled caste or scheduled tribe.

( ii ) In the case of candidate holding B.Com. degree of the University, the 3 commerce subjects, namely Accounts, Economics and Business Administration shall be treated as optional subjects for the purpose of determining his eligibility for admission.

( iii ) A candidate who already holds a Master's Degree may be exempted from the operation of the rule of securing minimum marks at the qualifying examination.

24. The following provision existing in Ordinance Nos. 211, 234 and 248 in respect of admission to M.A., M.Sc., and M.Com. examinations respectively be deleted :—

“The Head of the Institution/University Department concerned may at his discretion relax the restriction of securing minimum marks at the qualifying examination in cases of not more than three candidates in a class.

25. Clause (iii) of the minimum qualifications for Professors and clause (iii) of the minimum qualifications for Readers in O.141 B of the University Hand Book Part II be reworded so as to read as follows :

(A) Professors.....(iii) Ten years experience of teaching at a University or a college or ten years post-doctoral research experience and considerable independent published research work, and some experience of guiding research.

(B) Readers.....(iii) Five years experience of teaching at the University or a College or five year post-doctoral research experience and independent published research work, and some experience of guiding research.

26. The following new O.199-D-5 be introduced and the existing O.199-D-5 be re-numbered as O.199-D-6.

“O.199-D-5 : A candidate for the B.A./B.Com. Correspondence Course shall be required to submit at least 50% Response sheets failing which he will not be allowed to appear at the examination. The Director of the Institute of Correspondence Studies shall send of the University a list of such candidates as fail to comply with the above requirement at least 21 days before the date of the commencement of the examination.”

27. Ordinance 47—Add under the heading—‘Diploma’ the following at the appropriate place :

1. Cooperation.
2. Banking & Finance.

## 28. Add the following new Ordinance :

O.250-J—A candidate who after passing the Bachelor's Degree Examination in Commerce/Agriculture Science/Arts of the University or of any other University recognised for the purpose by the Syndicate has attended a regular course of study in an affiliated college/University Department for one academical year shall be eligible for appearing at the Diploma Examination in Cooperation.

Notes : (1) Admissions to the course may be made on a selective basis keeping in view not only the academic qualifications but also the experience gained by the in-service or on the job-applicants.

(2) Instruction shall be, inter-alia, provided by a course of lectures in each paper. The usual norm (subject to such variation as may be decided by the Head of the Institution/Department) may be 40 lectures for each paper.

## 29. Introduce the following new Ordinance :

O.250-K:—A candidate who after passing the Degree Examination in Commerce/Agriculture/Science/Arts of the University or of any other University recognised for the purpose by the Syndicate has attended a regular course of study in an affiliated college/University Department for one academical year shall be eligible for appearing at the Diploma Examination.

Notes : (1) Admission to the course may be on a selective basis keeping in view not only the academic qualifications but also the experience gained by the in-service or on the job applicants.

(2) Instructions shall be, inter-alia, provided by a course of lectures in each paper. The usual norm (subject to

such variation as may be decided by the Head of the Institution/Department) may be 40 lectures for each paper. For non-Commerce graduates special lectures may be arranged on Book-Keeping (about 20) and on Business Organisation (about 20).

30. O.248 :—Introduce a new paragraph so as to occur before the foot note begins.

“A candidate who after taking his B.A./B.Sc. degree of the University or of any other University recognised for the purpose by the Syndicate and obtaining at least 45% marks in the aggregate or in the subject of Economics has completed as regular course of study in an affiliated college for one academic year shall also be deemed eligible for admission to the Previous examination for the degree of Master of Commerce in (i) Applied Economics and (ii) Banking & Finance Groups.”

31. O.65-IE : The word “generally” be substituted for the word “officially” occurring in note No. 2 under the minimum qualifications of teachers for Certificate/Diploma Course in Modern European Languages given in O.65-IE.

*Introduce the following new clause to O.65-I.*

*( I ) for Teachers of Diploma Course in Indian Culture.”*

A second class M.A. in History with specialisation in Ancient Indian History and Culture.

IV—(Vide Syndicate Res. No. 28 dated 28.9.1970)

1. O.47 *Add :—*

(1) Economic Administration.

(2) Financial Management.

2. O.141 B : From N.B. No.1 to the Ordinance, delete the word “Commerce” and the second

sentence beginning with the words ' these qualifications' and ending with the words paper concerned.',

3. Add the following qualifications for the teachers in the Faculty of Commerce by introducing the following new O.141C :—

O.141 C : The following shall be the minimum qualifications for teacher in the University Departments of the Faculty of Commerce :—

### FACULTY OF COMMERCE

- Lecturer/Research Associate :* A First class M.Com. Degree of an Indian or a foreign University in the subject concerned or a Second class M.Com. Degree in the subject concerned with at least three years experience of teaching degree classes or accredited research experience of at least three years (preferably a research degree).
- Reader :*
- ( i ) A First or a Second Class M.Com. degree of an Indian University or an equivalent qualification of a foreign University in the subject concerned.
  - ( ii ) Either a research degree of a doctorate standard or published work of a high standard, and
  - ( iii ) Five years' experience of teaching at a University or a college or five years' Post-doctoral research experience and independent published research work, and some experience of guiding research.
- Professor :*
- ( i ) A First or Second Class M.Com-Degree of an Indian University or an equivalent qualification of a foreign University in the subject concerned.
  - ( ii ) Either a research degree of a doctorate standard or published work of a high standard, and

- ( iii ) Ten years' experience of teaching at a University or a College or ten years' post-doctoral research experience and considerable independent published research work, and some experience of guiding research.

- N-B.* 1. 'Subject concerned' for the purpose of this Ordinance will mean (a) Accountancy and/or Business Statistics for the Department of Accountancy and Business Statistics (b) Business Administration for the department of Business Administration and (c) Economic Administration and/or Financial Management and/or Applied Economics and/or Banking & Finance for the Department of Economic Administration and Financial Management.
2. A candidate holding a general M.Com. Degree may be deemed to possess the M.Com. degree in the subject concerned provided he had offered at his M.Com. examination majority of papers of the subject prescribed for the M. Com. Examination of this University in that subject.
  3. Teachers holding M.Com. degree, or M.A. (Economics) degree with B.Com., and in permanent employment (which term includes those working on probation) of the University on the date this Ordinance comes into force will be deemed to possess the M.Com. degree in the subject concerned.
  4. For lecturers teaching Actuarial Science, Steno-typing and Diploma Course in Cost Accountancy, the prescribed qualifications shall be the same as mentioned in O.65.
  5. A candidate holding the M.B.A. degree will be deemed to possess, the M. Com. degree in the subject concerned for the Department of Business Administration provided he had earlier obtained a



Bachelor's, Master's degree in Commerce or Economics,

6. Subject to fulfilment of the other requirements of this Ordinance, a candidate holding a first or second class M.B.A. degree or one holding a Master's degree along with Post-graduate Diploma in Business/Industrial Management will be deemed qualified to teach M.B.A. and Diploma in Business/Industrial Management classes.
7. Qualifications are relaxable at the discretion of the Selection Committee in special cases.

4. O.65 Part "III Faculty of Commerce" be re-written as follows :—

### III—FACULTY OF COMMERCE

- (A) (1) For teachers of Degree Classes :—

At least a second class M.Com. either in the subject or who has offered at his M.Com. Examination majority or papers of the subject prescribed for the M.Com. examination of this University in that subject.

- (2) For teachers of "Acturial Science" for T.D.C. (Com.).

At least a Second Class Master's Degree in M.A./M.Sc. (Statistics) with Mathematics in B.A. B.Sc.

Or

At least a Second Class Master's Degree in M.A./M.Sc. (Mathematics) with Statistics as one of the optional papers.

Or

At least a Second Class M.Com. Degree with Acturial Science.

- (3) For teachers of Steno-typing :—

A Second Class M.Com. Degree with Steno-typing (Hindi/English) at the B.Com. Examination:

Or

At least Second Class M.Com. Degree with Steno-typing (Hindi/English) at the Intermediate Examination in Commerce.

Or

A Second Class M.Com. Degree with Diploma in Steno-typing of the University.

- (4) For teachers of Diploma in Cost Accountancy :—

- (a) For teaching papers other than Engineering & Mathematics :—

A Second Class M.Com. Degree, or Fellow of the Institute of Chartered Accountants of India/Institute of Cost and Work Accountants of India, with at least Second Class graduate degree or equivalent foreign qualifications;

Or

A holder of Diploma in Cost Accountancy in the Second Division of the University of Rajasthan.

- (b) For the Papers of Engineerings :—  
Bachelor of Engineering.

- (c) For the Papers of Mathematics :—

A Second Class M.A. or M.Sc. in the subject.

- (B) For Teachers of Honours and Post-graduate Classes :

A first Class M.Com. either in the subject or who offered at his M.Com. Examination majority of papers of the subject prescribed for the M.Com. Examination of this University in that subject.

Or

At least a Second Class M.Com. either in the subject or who offered at his M.Com. Examination majority of papers of the subject prescribed for the M.Com. Examination of this University in that subject with three years experience of teaching the subject to the degree classes.

(C) For Heads of Degree Departments :

They must have at least three years experience of teaching the subject to degree classes in a College.

(D) Heads of post-graduate Departments same as for the Faculty of Arts.

- Notes :—
1. Persons already in employment in the affiliated colleges of the University before 8th May, 1962 on which date an earlier version of this ordinance came into force will not be adversely affected.
  2. Teachers holding M. Com. degree or M. A. (Economics) degree with B. Com. and in permanent employment (which term includes those working on probation) of the affiliated Colleges on the date this ordinance comes into force will be deemed to possess the M. Com. degree in the subject concerned.
  3. The minimum qualifications for teachers of General Education, Hindi, English and Mathematics will be the same as mentioned under the Faculties of Arts/ Science.
  4. The experience of teaching Hindi, English, General Education and Mathematics will not qualify for appointment as Heads of Degree/post-graduate Departments.

V. (Vide Syndicate Res. No. 14 dated 28th Sept., 1970)

1. O-138 (e) (4) be reworded so as to read as under—

“If the candidate fails to satisfy the Viva-voce examiners or if there be a difference of opinion between the Viva-voce examiners; the candidate may be allowed to appear at a second viva-voce examination on payment of a fee of Rs. 150/- to be held not later than one year from the date of the first viva-voce. If

at the Second viva-voce examination the candidate fails to satisfy the examiners, his thesis shall be finally rejected."

2. *O·139* : be reworded so as to read as under :  
"If a candidate is permitted to improve and resubmit his thesis, he shall be required to resubmit it not earlier than six months and not later than twelve months from the date of such permission along with a fee of Rs. 150/-"

VI (Vide Syndicate Res. No. 15 dated 28th Sept.,1970)

*O·147* be reworded so as to read as under :—

- O·147*: (i) A candidate who for any reason whatsoever is unable to present himself for an examination shall not get a refund of his fee provided that of a candidate dies before the commencement of the examination or is debarred from appearing at the examination his fee may be refunded at (ii) When a candidate is unable to appear at an examination on account of sickness or other sufficient cause half of the examination fee paid by him may be carried over to the next following examination provided that where a candidate has appeared at a practical examination held before the written examination only one fourth of the amount shall be carried over. The application duly forwarded by the Officer who had originally forwarded his application for admission to the examination must be sent so as to reach the Registrar not earlier than the commencement of the examination and not later than a month after the date of the commencement of the examination at which the candidate is unable to appear. In the case of sickness the application shall also be supported by a medical certificate from a qualified medical practitioner.

VII (Vide Syndicate Res. No. 27 dated 28th Sept.,1970)

1. *Ordinances Nos. 211, 234 and 248*

The last portion of the Note beginning with the words" with this end in view" and ending with the words"

the qualifying examinations'' be reworded so as to read as followings:

“With this end in view :—

- (I) The following concession of marks may be allowed in total aggregate or in the subject in which a candidate is seeking admission :
  - (a) A concession of 5 marks to a women candidate or a candidate belonging to scheduled caste/scheduled tribe or a candidate who has represented his Institution in Games & Sports/Co-curricular activities.
  - (b) A concession of 8 marks to a candidate who has represented his university in Games and Sports/Co-curricular activities at the Inter-University Board Meet.
  - (c) A concession of 10 marks to a candidate who has represented his State in Games and Sports/Co-curricular activities at the national level.
- (II) A candidate who has resresented the Nation in Games & Sports/Co-curricular activities at the International level may be exempted from the operation of the restriction of securing the prescribed minimum marks at the qualifying examination for purposes of admission.
- (III) A candidate who already holds a Master's degree and seeks re-admission to the degree in another subject be also exempted from the operation of the restriction of securing the prescribed minimum marks at the qualifying examination for purposes of admission.

O-252 N. B. No. (i) be reworded so as to read as follows :

“The following concession of marks in the total aggregate or

in any one subject may be allowed by the Head of an Institution :—

- (a) A concession of 5 marks to a woman candidate or a candidate belonging to a scheduled caste/scheduled tribe or a candidate who has represented his Institution in Games & Sports/Co-curricular activities.
- (b) A concession of 8 marks to a candidate who has represented his University in Games and Sports/Co-curricular activities at the Inter-University Board Meet.
- (c) A concession of 10 marks to a candidate who has represented his State in Games and Sports/Co-curricular activities at the national level.

New notes Nos. (ii) and (iii) be inserted as follows :

- (ii) A candidate who has represented the Nation in Games & Sports/Co-curricular activities at the International level may be exempted from the operation of the restriction of securing the prescribed minimum marks at the qualifying examination for purposes of admission.
- (iii) A candidate who already holds a Master's degree may be exempted from the operation of the rule of securing the prescribed minimum marks at the qualifying examination for purposes of admission. The existing Note No. (ii) be re-numbered as Note No. (iv) and the existing Note No. (iii) be deleted.

2. O.203 : Substitute—"B.A. (Pass or Honours) B.Sc. (Pass or Honours), B.Sc. (Ag.) or B. Com. (Pass or Honours)" for B.A., B.Sc., B.Sc. (Ag.) or B.Com." in the first two lines of the Ordinance.
3. O.221 : *Substitute*—"B.Sc. (Pass or Honours)" for "B.Sc." in the first line of the Ordinance.
4. O.243 : *Substitute*—"B.Com. (Pass or Honours)" for "B.Com." in the first line of the Ordinance.
5. O.83 A & 0.198 (1) be amended as follows.  
"Substitute-'31st July' in place of '7th August' in the first sentence of O.83 A, O.198 (1).
6. O.66 A: be amended so as to read as follows—  
Every degree and post-graduate college teaching subjects of study included in the Faculty of Commerce shall provide three Heads of Departments, one in Accountancy and Business Statistics, One in Business Administration, and one in Economic Administration and Financial Management.
7. O.54 be amended so as to read as follows—  
There shall be three Boards of Studies in the Faculty:
  1. Board of Studies in Accountancy and Business Statistics.
  2. Board of Studies in Business Administration.
  3. Board of Studies in Economic Administration and Financial Management.
8. O.55 be amended so as to read as follows—  
The distribution of subjects among

the three Boards shall be as follows:

*I) Board of Studies in Accountancy & Business Statistics*

*Pre-University*

1. Book-Keeping
2. Mathematics.

*B.Com. (Three-Year Course)*

1. 1. Accounts.
2. Elective Subjects:
  - a) Acturial Science.
  - b) Mathematics
  - c) Advanced Business Statistics.

*M.Com.*

1. Business Statistics.
2. Accountaney Group
3. Actuarial Science
4. Diploma in Cost & Works Accountancy

*II) Board of Studies in Business Administration*

*Pre-University:*

1. Business Methods.
2. Short Hand
3. Typing

*B.Com. (Three-Year Course)*

1. Hindi
2. English
3. Business Adm. Group.
4. Essay (English)
5. Elective Subjects :—
  - a) Insurance
  - b) Steno-typing
  - c) Labour Problems&Personnel Management.



*M.Com.*

1. Business Management
2. Secretariat Practice
3. Business Administration Group
4. Insurance Group.

*M.B.A.*

3. *Board of Studies in Economic Administration and Financial Management :*

*Pre-University*

1. Elements of Economics
2. Commercial Geography

*B.Com.**( Three Year Course )*

1. Economics Group
2. Elective subjects—
  - a) Advanced Banking
  - b) Trade & Transport
  - c) Public Economics

*M.Com.*

1. Economic Administration
2. Financial Management
3. Applied Economics Group
4. Banking & Finance Group
5. Transport Group
6. Business Economics
7. Corporation Finance.

Diploma in Banking &amp; Finance

Diploma in Cooperation

VIII. *Vide Syndicate Res. No. 28 Dated 28.9.1970.*

1.O.267 be re-written so as to read as follows

“O.267—There shall be the following 3 examinations which will commence from 1st (in case 1st happens to be a holiday, from the next working day) of the months noted against each, except that the date of commencement of the First M.B.,B.S. examination of 45 days from the date of declaration of the results of the preceding December examination:—

1. First M. B. B. S. Examination—February & December

2. Second M.B.B.S. Examination—May & December
3. Final M.B.B.S. Examination—May & December

N.B. :—There shall be no Supplementary Examination for the candidates failing in any of the above Examinations.

IX.            (Vide Syndicate Res. No. 36 dated the 7th November, 1970)

I.    Clause (3) of O. 347 (C): be amended so as to read as follows :—

„ (3) Once a policy has been accepted for the purpose of being financed from the fund, the terms of the policy shall not be altered without the prior consent of the Vice-chancellor.”

X.            (Vide Syndicate Res. No. 31 dated the the 7th November, 1970)

O.193 *be amended as follows:*

Add the following at the end of the last sentence of the Ordinance 193.

“and also for the purpose of admission to a higher course of study.”

XI.            Vide Syndicate Res. No. 31 dated 7th November, 1970.

O.329 M. 13 & O 329 M. 21 *be amended as follows:*

(1) O.329 M-13                      Substitute—40 lessons for ‘50 lessons.’

(2) O.329 M-21                      Substitute—‘any one of’ for any to other ‘f’ in Sl.No. 4.

XII.            Vide Syndicate Res. No. 15 dated 14-12-1970.

O.122 A (C) *be amended as follows:*

Substitute LL. B. professional Examination for LL.B. (Final) Examination against the name of Venechand Durlabhji Javeri Memorial Gold Medal’.

XIII.            (Vide Syndicate Res. No.22 dated 14-12-70)

1.    O.66 *be amended so as to read as follows:*

"O.66. The following are recommended as the minimum pay scales for teachers in affiliated Colleges :—

A. For teachers of Colleges affiliated in Faculties of Arts/Commerce/Science ( including Agriculture).

1. Principals of post Graduate Colleges : Rs. 1110.50-1200-60-1500.
2. Principals of Degree colleges Rs. 700-40-1100-50-1200.
3. Heads of Post-Graduate Deptts. Rs. 700-40-1100-50-1200.
4. Heads of Degree Departments. Rs. 375-25-550-30-850.
5. Lecturers in post-graduate and Degree Departments (With a selection grade of Rs. 600-30-750-40-950-50-1100 for 10 per cent of the cadre subject to the condition that to be entitled for the selection grade a person must have put in at least 10 years continuous service in the normal scale.)
6. Cartographer Rs. 285- 20 -425 - EB - 25 -550.

B. *For teachers of Colleges in the Faculty of Education*

1. Principals of post graduate colleges Rs. 1100.50-1200-60-1500
2. Principals of Degree colleges. Rs. 800-50-1200.
3. Professors/Heads of Post-graduate Departments.. Rs. 700-40-1100-50-1200
4. Heads of Degree Departments. )

- |    |  |             |                               |
|----|--|-------------|-------------------------------|
| 5. | Lecturers of Post-graduate and Degree Departments.   | )<br>)<br>) | Rs. 375-25-550-30-850.        |
| 6. | Craft Teachers who are at least graduate in Science/Arts/Commerce with a Diploma or Degree in Crafts or Two-Year course or L. T. (Constructive). |             | Rs. 225-15-345-20-525.        |
| 7. | Junior Craft Teachers  | )<br>)<br>) | Rs. 160-80-200-10-240-15-360. |
| 8. | Workshop Assistants  | )           |                               |
- C. *For Teachers of Colleges affiliated in the Faculty of Ayurveda.*
- |    |                                |  |                         |
|----|--------------------------------|--|-------------------------|
| 1. | Principal (Pracharya)          |  | Rs. 800-50-1300         |
| 2. | Heads of Departments (Acharya) |  | Rs. 500-30-800-50-1000, |
| 3. | Readers (Upacharya)            |  | Rs. 400-25-750-40-950,  |
| 4. | Lecturers (Paradhyapak)        |  | Rs. 375-25-550-30-850.  |
| 5. | Demonstrator (Nirdeshak)       |  | 225-15-345-20-525       |
- D. *For Teachers of Colleges affiliated for Sanskrit Examinations in the Faculty of Sanskrit Studies.*
- |    |   |  |                        |
|----|---|--|------------------------|
| 1. | Principals of Colleges of Acharya Standard            |  | Rs. 800-50-1300        |
| 2. | Principals of Colleges of Shastri Standard.           |  | Rs. 375-25-550-30-850. |
| 3. | Professors/Heads of Departments of Acharya standards. |  | Rs. 375-25-550-30-850  |
| 4. | Lecturers (Shastri and/or Acharya Standard)           |  | Rs. 250-20-450-25-625  |
- E. *For Teachers of Colleges affiliated for Shiksha Shastri Examination in the Faculty of Sanskrit Studies :*

1. Principal Rs. 600-30-753-40-950-50-1100.
2. Lecturers Rs. 250-20-450-25-625.

F. *For Teachers of Colleges affiliated in the Faculty of Law :*

1. Heads of Post-graduate Departments. Rs. 700-50-1250.
2. Heads of Degree Departments. Rs. 600-30-750-40-950-50-1100.
3. Lecturers (Degree and/or Post-graduate Departments.) Rs. 375-25-550-30-850.
4. Part-time Lecturers :
  - (a) For those who are required to take 6-8 periods per week Rs. 225/- p. m.
  - (b) For those who are required to take 3-4 periods per week Rs. 150/- p. m.

G. *For Physical Training Instructors in the affiliated Colleges.*

- (a) For those who possess a Degree in Physical Education or a Bachelor's Degree with Diploma in Physical Education (at least one year's course) Rs. 250-15-400-25-600.
- (b) As at (a) above with either 10 years professional experience out of which 5 year as physical Instructor in a Degree College or a Second class Master's Degree with a Degree of Diploma in physical Training (at least one year course) Rs. 285-25-550-30-800.

H. *For Librarians in the Affiliated Colleges.*

- (a) For those who possess Rs. 250-15-400-25-600.  
a Bachelor's Degree  
with a Degree or Dip-  
loma in Library  
Science (one year  
Course).
- (b) For those who possess Rs. 285-25-560-30-800.  
(a) Master's Degree  
in Library Science or  
(b) Second class Mas-  
ter's Degree with a  
Degree or Diploma in  
Library Science (One  
year course); or Gra-  
duate with Degree or  
Diploma in Library  
Science with 10 years  
professional experience.

XIV. *(Syndicate Ref. No. 20 dated 1st Feb. 1971)*

O.341 be amended so as to read as follows :—

- (i) O.341—The University shall have a Board of sports  
which shall consist of :—
  - (1) Two members of the Syndicate to be appointed  
by the Syndicate.
  - (2) One professor or Head of a University  
Teaching Department to be nominated by the  
Vice-Chancellor.
  - (3) Four Physical Instructors/Directors three of  
whom shall be from the affiliated colleges  
appointed by the Syndicate and one from the  
University Colleges/Teaching Departments to  
be nominated by the Vice-Chancellor.
  - (4) Principal/Director of the college holding the  
University Woman's Tournaments.
  - (5) Principal/Director of the college where Athletic  
Meet (for Men) is to be held.
  - (6) Two captains of University Teams in the  
various games nominated in rotation by the  
Chairman, University Sports Board every year, and

- (7) Director of Physical Education either of the University Teaching Departments or of any of the University colleges to be nominated by the Vice-Chancellor (Member-Secretary).

The Syndicate shall appoint a Chairman from among the local members (other than the student members) of the Board.

- (2) O.342: be ammended so as to read as follows :

“O.342. The members of the Board (other than those under clauses, 4,5 and 6 of O.341) shall hold office for three years.”

XV. (Vide Syndicate Res. No. 30 dated 1st Feb., 1971)

- (3) O.67 be ammended as follows :

O.67—The Principal and all members of the teaching staff of the college other than those maintained by the State, shall be appointed on a written contract which shall be on a duly stamped paper and as per proforma laid down by the University.”

O.68 :—The following form of Agreement is hereby prescribed to be adopted by the non-Government affiliated colleges for appointment to the teaching posts (except principal) :—

Agreement made this &.....day of.....19.....between.....of the first part and the Managing Committee of.....College.....through the Principal/Secretary of the Second Part :—

Whereas the college has engaged the party of the first part to serve the college as.....subject to the conditions and upon the terms hereinafter contained, this agreement witnesseth that the party of the first part and the college hereby contract and agree as follows :—

- (1) That the engagement shall come into effect from the.....day of....., 19.....and shall be determinable as hereinafter provided.
- (2) That the party of the first part in employed in the first instance, on probation for a period of one year and shall be paid a monthly salary of Rs. ....

in the grade\* of Rs.....and will be entitled to the benefits of the provident fund in accordance with the provisions and rules laid down by the University for the purpose. The salary will be paid by means of cheque not later than fifteenth day of each month.

- (3) That the party of the Second part may, at its discretion, extend the period of probation by another year, so that the total period of probation shall in no case exceed two years. If within three months of the expiry of the period of probation no notice of determination of this agreement or of an extension of the period of probation is received by the party of the first part the party of the first part will be ipso-facto taken as confirmed. Grade increment shall be earned on confirmation
- (4) That the party of the first part shall not engage in any trade or business, or in other activity which in the opinion of the Principal, may be prejudicial to his work in the college.
- (5) That the party of the first part shall not apply for any job or appointment whether part-time or in any other form elsewhere without prior permission of the Principal of the college in writing.
- (5) After confirmation, the services of the party of the first part can be terminated only on the following grounds :—
  - (a) Willful neglect of duty.
  - (b) Misconduct (including persistent disobedience) or Moral turpitude.
  - (c) Breach of any term of the contract,
  - (d) Physical or mental unfitness, or
  - (e) Incompetence, provided this plea shall not be used after five years continuous service in the institutions.
- (7) Except when termination of service has taken place under para 6(a), (b) and (c), neither party shall

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\* The grade shall not be lower than laid down by the University.



terminate this agreement save by giving to other party three months notice in writing or by paying a sum equivalent to thrice the monthly salary than being earned by the party of the first part.

- (8) While the party of the first part is on probation as provided in para 2, there will be three months notice on either side of termination of the contract, or in lieu of such notice a payment of thrice the monthly salary then being earned by the party of the first part.

9. Any difference or dispute of any kind whatsoever arising out of this contract shall be referred to arbitration and determined in accordance with the provisions of the Indian Arbitration Act, 1940. Such Arbitration shall be held by two persons not associated with the college—one to be chosen by each party to this agreement, and in case of their non-agreement, the Vice-Chancellor or his nominee shall act as Umpire, The decision of the arbitrators or of the Umpire, as the case may be, shall be final. No party to this agreement shall have a right to sue the other in a court of Law, except for the purpose of enforcing the award.

N.B. : This clause shall not apply in the case of a dispute arising in connection with the termination of the services of any member of the teaching staff who is on probation or on a temporary basis.

Signed this.....day of.....19.....

(1)

(2)

In the presence of

(1)

(2)

O.61—A : (New Ordinance)

The following form of agreement is prescribed for being adopted by the Non-Government affiliated Colleges for appointment to the post of Principals :—

Agreement made this .....day of.....  
19.....between.....of the first part (hereinafter  
called the Principal) and the.....(hereinafter  
called the Managing Committee) of.....

College.....through the President of the Second Part.

Whereas the Committee has engaged the party of the first part to serve the college as Principal subject to the conditions and upon the terms hereinafter contained, this agreement witnesseth that the party of the first part and the Managing Committee hereby contract and agree as follows :-

- (1) That the agreement shall come into effect from the .....day of.....19.....and shall be determinable as hereinafter provided.
- (2) That the Principal is employed, in the first instance, on probation for one year and shall be paid a monthly salary of Rs.....in the grade\* of Rs.....and will be entitled to the benefits of the provident Fund in accordance with the provisions and rules laid down by the University for the purpose. The Salary will be paid by means of cheque not later than fifteenth day of each month.
- (3) That the party of the second part may, at its discretion, extend the period of probation by another year; so that the total period of probation shall in no case exceed two years. If within three months of the expiry of the period of probation no notice of termination of this agreement or of an extension of the period of probation is received by the Principal, he/she will be taken as ipso-facto confirmed. Grade increment shall be earned on confirmation.
- (4) The Principal shall perform all such duties as pertain to the Principal of an affiliated college and shall be responsible for the due discharge of all such duties. The Principal shall be solely responsible for the internal management and discipline of the said college including the arrangement of the college time-table, the allocation of duties to all the members of the college staff, including duties of warden proctor and other assignment connected with the internal administration of the college the grant of leave to staff, the appointment, control and removal of the Lower Division Clerks, Laboratory Assistants, Technicians, gardeners and other class IV Staff, the granting of free ships/half free-ships and other types of financial aid to students within the numbers sanctioned by the Govt. or the

Management as the case may be, the control of the college hostel or hostels through the warden, the admission, promotion, punishment of students, the organisation of games and other activities. He shall administer all students' funds such as games fund, Magazine fund, Union fund, Reading Room Fund Examination Fund etc., with the help of a committee constituted by him and in accordance with any rules laid down by the university and subject to audit and scrutiny of accounts by the Management. He shall have all powers necessary for the purpose including power, in an emergency to suspend members of the teaching staff pending report to an decision by the Managing Committee. In the spheres of his sole responsibility, he shall follow the directions received from the University or Government in connection with the administration of the College. In financial and other matters for which he is not solely responsible the Principal shall follow the directions of the Managing Committee as issued to him through the Secretary. All instructions by the Managing Committee or the Secretary to the members of the staff shall be issued through the Principal and no member of the staff shall have a direct approach to any members of the managing committee except through the Principal.

The Principal shall have all necessary powers of control and discipline in regard to clerical and administrative staff, including the power to withhold increments. All the appointments in the office of the Principal shall be made with his concurrence.

- (5) That the Principal shall be an ex-officio member of the Managing Committee and of all appointment committees with power to vote provided he shall not be a member of a committee appointed to enquire into his own conduct.
- (6) That the Principal shall devote his whole time to the duties of his appointment and shall not engage directly or indirectly in any trade, business, or in any other activity which in the opinion of the Management may be prejudicial to his work in the college.
- (7) That the Principal shall not apply for any job or appointment whether part time or in any other

form elsewhere without prior permission of the Managing Committee in writing.

(8) After coaconfirmation, the service of the Principal can be terminated only on the following grounds ;

(a) Wilful neglect of duties :

(b) Misconduct; including disobedience to the orders of the Managing Committee passed in accordance with the terms of this agreement and Statutes, Ordinances, Rules, Regulations directions of the University; or Moral turpitude;

(c) Breach of any term of the contract;

(d) Physical or mental unfitness; or

(e) Incompetence; provided this plea shall not be used after three years service in the institution.

(9) Except when termination of services has taken place under para 8 (a), (b), & (c), neither party shall terminate this agreement save by giving to other party three months notice in writing or by giving a sum equivalent to twice the monthly salary then earned by the Principal.

(10) While the Principal is on probation as provided under para 2, there will be three months notice on either side, of termination of the contract or in lieu of such notice a payment of thrice the monthly salary then being earned by the Principal provided that such termination of the first day of January and 31st day of March of any year.

(11) Any difference or dispute of any kind whatsoever arising out of this contract shall be referred to arbitration and determined in accordance with the promision of the Indian Arbitration Act, 1940. Such Arbitration shall be held by two persons not associated with the college one to be chosen by each party to this agreement, and in case of their non-agreement, the Vice-Chancellor or his nominee shall act umpire. The decision of the arbitrators or of the Umpire, as the case may be shall be final. No party to this agreement shall have a right to sue the other in a court of Law, except for the purpose of enforcing the award.

N.B. : This clause shall not apply in the case of a dispute arising in connection with the termination of the services of the Principal who is on probation or on a temporary basis.

Signed this.....day of.....19.....

(1) .....

(2) .....

In the presence of :

(1) .....

(b) .....

XVI. Vide Syndicate resolution No. 20 dated 10-3-71.

- (1) Insert "Intermediate or" between the words—'as have passed the and First Year Examination.' In O.204, O.222 and O.244.
- (2) In O.51 under the heading—I-Education—Degree "insert before Master of Education" Shiksha Shastri."
- (3) In O.51 A : Delete 'Education' from the list of subjects and 'Shiksha Shastri' from the list of Degrees.
- (4) O.65-IX- (reg. minimum qualifications for teachers in the Faculty of Sanskrit Studies).

*Delete* : "For lecturers of Shiksha Shastri classes : At least a second class Shiksha Shastri' and add the same under O.65-V in respect of the Faculty of Education.

- (5) O.65 XI : The minimum qualifications for Principals of college of Shiksha Shastri Standard be deleted under the heading—"Faculty of Sanskrit Studies"; and instead the same be put under the heading in respect of Faculty of Education.
- (6) O.66 : *Substitute* 'Education' for Sanskrit Studies' in the heading 'E' of O.66.
- (7) O.329 M. 2 :  
Delete "Shiksha Shastri

- (8) The existing set of Ordinances governing the Shiksha Shastri examination numbered as O.329 M-13 to O.329 M-22 and R.43 CB.9 in that behalf as printed at pages 339-343 of Volume XLV of Minutes be *shifted en-bloc* from the Chapter of Faculty of Sanskrit studies" to the Chapter of "Faculty of Education" so that the numbers of the Ordinances and Regulations shall be as follows :

<i>Existing number</i>	<i>New Number</i>
0.329 M-13	0.329 L-68
0.329 M-14	0.329 L-69
0.329 M-15	0.329 L-70
0.329 M-16	0.329 L-71
0.329 M-17	0.329 L-72
0.329 M-18	0.329 L-73
0.329 M-19	0.329 L-74
0.329 M-20	0.329 L-75
0.329 M-21	0.329 L-76
0.329 M-22	0.329 L-77

- (9) Introduce a new clause (e-l) in O.115.

*O.115 (e-i)*

One scholarship of the value of Rs. 40/-p.m. to be awarded to a candidate who stands first at the Final Year Examination of the Four Year integrated Teacher-Education course in Science and joins either the M.Sc. (Previous) class or M.Ed. class in the University or in any of its affiliated colleges in the same year, provided that he passes the aforesaid Final Year Examination in the First attempt. The tenure of the Scholarship shall be 24 months in the case of candidates joining the M.Sc. (Prev.) class and 12 months for those joining the M.Ed. class."

- (10) In O.167 (b) : Substitute—"to clear the subjects of the compulsory group prescribed for

the first Year T.D.C. (Arts) Examination of the University if he has not already passed in the same at the qualifying examination” for ‘the subjects of the compulsory group prescribed for the First Year T.D.C. (Arts) Examination of the University.’

(11) *O.169 E and O.169 F :*

Add the following condition's which will be numbered as (iv) in the case of 0.169E and (3) in the case of 0.169F, below the First paragraph of each of the two Ordinances :

“In the case of ex-students who re-appear at the M.A./M.Sc./M.Com. Examination, the sessional marks obtained by them at the examination in the immediately preceding year shall be taken into account.”

(12) *In O.169-D :*

In proviso No. (i) substitute “shall not rejoin a college for the purpose” for ‘will not be required to rejoin a college for the purpose.’

(13) *In O.169-F :*

In the first para of the Ordinance Second sentence beginning with the words—‘such a candidate’ and ending with the words—‘the purpose’ be replaced by the following sentence :

“Such a candidate shall not rejoin a college for the purpose.”

(14) *In 0.65-VII, in column 3 of teaching experience for the post of Principal of a Medical College the existing provision viz., ‘5 years administrative experience as Head of the Teaching Department in a Medical College’ be deleted and instead the following be written :*

“Head of a Department with at least 5 years standing as a Professor.”

- (15) The following provision be made by adding a new paragraph under O.74 of the University Hand Book Part II :

“The maximum number of students in a class for guidance in practice teaching (for the examinations in the Faculty of Education) be 30.”

- (16) Add the following note in 0.124.

“For teachers of a standing of at least ten years, the condition of obtaining second division at the degree examination may be relaxed at the discretion of the Research Board.”

- (17) The following be added as note (3) under existing 0.125 (a) :

“No person will be normally allowed to guide his/her own close relation. If some body wants to do so, prior permission of the Research Board will be necessary. If such a permission is granted, the supervisor will not act as one of the examiners when the thesis is submitted. All the three examiners would be external. The Supervisor will even not suggest names of examiners to evaluate the thesis.”

The term ‘close relations’ includes wife, husband, son, daughter, grand-son, grand-daughter, brother, sister, nephew, niece, grand-niece, grand-nephew, uncle, aunt, first cousin, son-in-law, daughter-in-law, and sister-in-law, and nephew, niece grand-niece & grand-nephew of Supervisor’s wife.

- (18) An additional paragraph be added to the existing 0.136 (2) :—

“A critical edition or translation of a work, approved specially for the purpose by the Research Board at the time of registration, when accompanied by an adequate introduction and commentary of a scholarly nature may also be consi-



dered for the award of a Ph.D. degree, provided that the other requirements are fulfilled."

(19) O.124 be amended so as to read as under :

A candidate for admission to the degree of Ph.D. in the Faculties of Arts, Science, Commerce, Education, Law, Engineering and Technology and Medicine and Pharmaceutics, must have obtained the Master's degree (with atleast 55% marks at the post-graduate examination or second division at the post-graduate examination with atleast second division at the Degree examination) of the university or of another University recognised as equivalent thereto in the subject or any allied subject in which he/she wishes to pursue research, provided that the masters degree have been obtained after taking the Bachelors degree full prescribed course for the degree.

(20) Amend the Ordinance 157 (A) so as to read as under :—

A candidate shall be permitted to apply for revaluation of his/her answer book of any one subject/paper compulsory or optional either for a pass or for improvement of division only, subject to the condition that the candidate either passes or secures division he seeks in the remaining subjects in accordance with the rules applicable to that examination. Such as application in the prescribed form must reach the Registrar's office with in 20 days of declaration of result of the examination concerned, except when a candidate has applied for scrutiny of his answer books in which case the application for re-examination should reach the Registrar's office within 15 days of the despatch of scrutiny result. The applications not received on the prescribed form shall be rejected.

N.B. : 1. At the examinations where more than one subjects are prescribed, the candidate shall

be allowed the facility of revaluation in the papers/papers of only one subjects.

2. In the examinations where it is necessary for the candidates to secure a minimum aggregate in the total of the subjects/paper for a pass, the re-evaluation will be permitted only in case the candidate secures that required minimum in the aggregate of the remaining papers/subjects.
3. Such examinations where only one paper—subject is prescribed and at the post-graduate examinations, a candidate shall be permitted to apply for revaluation in one paper only.”

(2) The re-evaluation of answer books will be permitted in the case of Main (not supplementary) examination only.

(3) The process of re-evaluation includes the scrutiny of answer books and therefore, it will not be necessary for a candidate requesting for reevaluation of answer books to apply for scrutiny of answer books prior to reevaluation. He may apply for reevaluation directly or after scrutiny as the case may be, in accordance with the provision of this ordinance.

(4) A candidate shall be required to pay a fee of Rs. 35/- per paper (not subject) for reevaluation of answer books, inclusive of scrutiny fee. In case the candidate applies for scrutiny and thereafter applies for reevaluation, he shall be required to pay Rs. 35/-per answer book(s) in addition to the scrutiny fee of Rs. 10/- already paid by him.

(5) Two independent Re-evaluators (One of whom shall be as far as possible from outside the University) shall be appointed for re-evaluation.

(6) The result of revaluation shall be worked out by taking into account the average of two awards, the difference between which is the least out of the 3 awards available with the University. (i.e. one award of the original examiner and two re-evaluators) In case two awards are equidistant from the third award, the average of all the three awards shall be taken into account.

(7) The award worked out as a result of re-evaluation of scripts shall be taken into account only to the advantage

of the candidate and only if it changes the character of result of the candidate, viz., if the candidate passes instead of failing in the subject/paper or if he gets the percentage of marks required for a higher division in the examination concerned.

(8) In case a candidate applies for re-evaluation in more than one paper in a subject, the result of such a candidate for re-evaluation shall be worked out by taking into account the total increase in the marks arrived at as a result of re-evaluation in all the papers in which re-evaluation has been applied for in accordance with the rules.

(9) Each re-evaluator shall be paid remuneration at the rate of Rs. 5/-per script besides the expenditure incurred by him as postal charges etc.

(10) If as a result of re-examination the character of the result of a candidate changes. Half the revaluation fee deposited by him shall be refunded.

(11) If the Vice-Chancellor, on the basis of the onwards received from the re-evaluators, feels that the original examiner had not been fair in assessment, he may debar such an examiner from the future examinership of this University for a period of 1 to 5 years.

(12) The answer-books shall not be subject to any inspection or production before any external or internal authority except at the instance of the Registrar or the Vice-Chancellor.

21. Amend second para of O.198 (i) so as to reads as under :—

“Such candidates as fail in one or more Compulsory subjects of Hindi, English, General Education/History of Indian Civilization & Culture/Elementary Mathematics/Elementary Biology at the I Year T.D.C. examination in Arts/Science/Commerce but pass in other subjects shall be required to seek admission to the next higher class not later than 31st July even though they wish to reappear in the aforesaid subject(s) at the ensuing supplementary examination.”

22. In 0.92.

The third paragraph beginning with the words—‘Candidates’ and ending with the words—‘will be permissible’

be re-written so as to read as follows  
(foot note remaining unchanged) :

“Candidate who are enrolled after the dates fixed under this Ordinance on account of late submission of application or the fee or both or for want of a migration certificate shall be required to pay a further fee of Rs. 3/- in each case. Candidates who fail to get themselves enrolled even on payment of a late fee of Rs. 3/- upto the 15th October may be enrolled on the recommendation of the Forwarding officer on payment of a Special late fee of Rs. 25/- Candidates who are not enrolled upto 20th December, of the year preceding the year of examination shall not be permitted to sit for any of the next ensuing examination of the University and no refund of any fee paid by the candidates till then will be permissible.”

23. Amend O.278 G.4 so as to read as under :

O.278 G.4. The examinations of M.D., M.S. and M.Sc. (Med.) will be held twice a year in May and December.”

24. In 0.278--A : Substitute—“Medicine” for “Medicine & Therapeutics.”

25. In 0.278—C : Branch M.D. Substitute “Medicine for Medicine & Therapeutics.”

26. In 0.278 Y—2 the words once a year in Oct. be replaced by the words twice a year in May & Dec.,

27. In O.65 VII following amendments be made—

(I) In para 6 of the Ordinance insert the words “and in the subject of Forensic Medicine” between the words—Surgery’ and ‘the qualifications’ so that the para will read as follow ;

“In case of specialities under Medicine and Surgery and in the subject of Forensic Medicine the qualifications and experience should also be as scheduled below but in case the post has been advertised and suitable candidates are not available, the qualifications can be relaxed.”

- (II) In the academic qualifications for the post of Assistant Professor/Lecturer in the subjects of Anatomy, Physiology, Pharmacology, Pathology and Microbiology, Preventive and Social Medicine, Chest Diseases, Veneriology and Dermatology, Anaesthesiology and Radiology the alternative qualifications be deleted so that the academic qualifications for these posts will be the same as for the higher post.
- (III) In the academic qualifications for post of Reader and Assistant Professor/Lecturer in Dentistry delete "B.D.S. preferably with M.B.B.S. "and put 'ditto' so that the academic qualifications will be the same as for Professors.
- (IV) Under teaching experience for the post of Assistant Professor/Lecturer in Medicine, Surgery, Obstetrics & Gynaecology, Paediatrics, Chest Diseases, Psychiatry, Veneriology and Dermatology, Medical Specialities, Orthopaedics, Anaesthesiology, Radiology, E.N.T. Ophthalmology, Surgical Specialities, Dentistry, the words—Tutor/Registrar' be replaced by 'Tutor Demonstrator, Registrar/Casualty Medical Officer Assistant Pathologist.

28—In O.278 and 278 D be amended as under :

(i) 0.278 C. : In paper I for ophthalmology for the degree of M.S. in Ophthalmology, Paper I should be named : 'Applied Basic Medical Sciences including optics in relation to Ophthalmology'.

Paper II should be named : General Ophthalmology in relation to systemic diseases and Ophthalmic pathology.

(ii) 0.278—D. In line No 3 there should be a full stop after the word "Examiner" and the rest of the paragraph be added against the Evaluation of papers M.D & M.S. which should be read as Paper I and IV by the Internal examiner who shall be the Head of the Department concerned provided he is so qualified. If the Head of the Department is not qualified the next senior person in the Department be appointed provided he is qualified to be appointed as post graduate examiner.

29. In O.278 D the following be added after the word External examiner in line 4 :

The External examiner who is the paper setter of Paper I and II shall send these papers to the second external examiner who is paper setter of paper III and IV.

30. In O.278 F.—following be added in line 11 after the word rotation :—

The External examiner who is the paper setter of Paper I or I and III will send these papers to the second external examiner who is the paper setter of Papers II or II and III.

31. In O.278—Y.5 the following be added after the 3rd line :—

Paper II—by one external examiner.

Paper III—by another external examiner.

The external examiner who is the paper setter of Papers II and I and II will send these papers to the Second external examiner who is the paper setter of papers III or Ist and III.

32. O.51—III : Substitute—‘Degree :-Bachelor of Adult Education for ‘Diploma Adult Education.

33. The heading occuring before o.329 L—65 be reworded so as to read as—“Bachelor’s Degree Course in Adult Education.”

34. O.329 L-65 : Substitute—Bachelor’s Degree Course in Adul Education’ for ‘Diploma Course in Adult Education.’

- 3k. O.329-L.66 : Substitute—‘Examination for the Bachelor’s Degree in Adult Education for ‘Diploma in Adult Education.”

- 36 329 L-67 : It be reworded so as to read as follow :—

“O-329 L-67 : The Examination will be in two parts : Part I comprising 5 Theory papers and Part II practice comprising two Section viz., Section (A) Field study leading to the writing and presentation of a dissertation and Section (B) organisation and Teaching of Literacy and Adult Education classes.”

37. 0.329 : Under B. optional, at the end of No. 8,p,79 the following may be added.

“9. Teaching of Science.

Note—A candidate choosing group 9 should take all the three optional papers from this group.”

38. At the end of Group VIII, the following may be added.

Group IX—Teaching of Science.

1. Advanced Methodology of teaching Science.
2. Modern Developments in Science in one of the following subjects.
  - (a) Physics.
  - (b) Chemistry.
  - (c) Biology.

One of the following.

- (a) Curriculum, Text Books and Instructional Materials in Science.
  - (b) Measurement and Evaluation in Science.
39. In O.322. Substitute—"Content—cum-Methodology of teaching any two of the following school subjects" for 'Principles and Methods of teaching any two of the following school subjects.'
40. Delete O.58 (a).
41. In O.51 substitute—"Bachelor of Library Science and Documentation (B.Lib.Sc., & Doc.)" for Bachelor of Science (B.Lib.Sc.) and substitute "Master of Library Science and Documentation (M.Lib. Sc.&Doc.)" for "Master of Library Science, M.Lib.Sc.)."
42. In O.123-I : Substitute "Master of Library Science and Documentation" for 'Master of Library Science' under the heading 'Faculty of Education.'
43. In the heading occurring before O.329-I be read as "Bachelor of Library Science and Documentation."
44. (i) In O.329-K : The Ordinance be re-written so as to read as under :

"O.329-K, A candidate for the examination shall be required to offer the following papers :

Paper I—Classification.

Paper II—Cataloguing.

Paper III—Documentation.

Paper IV—Reference Service.

Paper V—Bibliography & Book Selection.

Paper VI—Library Management.

Paper VII—Comparative Librarianship.

(ii) The heading occurring before O.329 K-2 be read as “Master of Library Science and Documentation.”

(iii) O.329 K-4 be re-written so as to read as under :  
“O.329K-4. A candidate for the examination shall be required to offer the following papers :

Paper I : “Universe of Knowledge : Structure & Organization.

Paper II : Librarianship : National and International aspects.

Paper III : Advanced Documentation & Reprography.

Paper IV : Advanced Reference & Readers Services.

Paper V & VI : Any two out of the following :

(a) Advanced Classification,

(b) Advanced Cataloguing.

(c) Government Publications.

(d) Bibliography and Literature.

Paper VII : One of the following :

(a) Public Library System.

(b) Academic Library system.

(c) Special & Technological Libraries.

(d) Management of Archives.

Paper VIII Literature Survey Project in Natural Sciences or Social Sciences or Humanities.

45. Amend Note O.65 V (a) so as to read as under :—



45. Amend Note O.65 V (a) so as to read as under :—

“A teacher teaching a subject under the paper-‘Content-cum-Methodology of teaching school subjects’ of the B. Ed. Examination should possess, in addition to the qualifications prescribed above, at least a second class Master’s Degree in the subject and he should have offered the subject as a teaching subject at the B.Ed. Examination”

46. Amend O.320 so as to read as under :

“O-320. A candidate who after taking the Bachelor’s Degree of the University of any other Indian University recognised for the purpose by the Syndicate, with two teaching subjects (as defined in Note No. 1 below) has completed a regular course of study in a college affiliated to the University for one academic year and has during the course of the year delivered at least 40 lessons in a recognised school under the supervision of the staff of the college shall be eligible for admission to the examination for the degree of Bachelor of Education.”

Notes 1. “Teaching subject’ means a subject offered by the candidate at his Bachelor’s Degree Examination either as a compulsory subject or as an optional subject but shall not include such subjects as were studied by him only for a part of the Bachelor’s Degree Course. Thus, the qualifying subjects like General English, General Hindi, General Education/History of Indian Civilisation & Culture, Elementary Mathematics etc. prescribed for the 1st Year T. D. C. course of this University of a subject dropped by a candidate at the part I stage of the degree Courses shall not be treated as teaching subjects.

2. Only such candidates shall be allowed to offer Social Studies for the B.Ed. Examination as have taken their Bachelor’s Degree with any two subjects of History, Political Science, Economics, Geography and Sociology.

47. O.252: be amended so as to read as follows—

“O.252. Candidate who has taken the Bachelor’s Degree in Arts, Science, Commerce/Medicine/Engi-

neering/Agriculture of the University or any other University recognised for the purpose by the Syndicate with full course prescribed for the degree and secured either a minimum of 45% marks in the aggregate marks prescribed for the examination or 48% marks in any one of the subjects offered by him at the Bachelor's Degree Examination shall be eligible for admission to the LL. B. First Year Course.

N. B. (i) For the purpose of this Ordinance the marks of only those subjects shall be taken into account which had been considered for awarding division at the Bachelor's Degree Examination.

(ii) Candidates who have passed their Bachelor's Degree Examination with full course at one time or in parts or as private candidates or by correspondence will also be eligible for admission to the LL.B. First Year Course provided they secured the minimum marks as prescribed above.

(iii) A concession of 5 marks in the total aggregate or in any one subject may be allowed by the Head of an Institution to a candidate under one or more of the following categories:

(a) Women candidate

(b) Candidate who has attained high Proficiency in games/co-curricula activities, and

(c) Candidate belonging to scheduled caste or scheduled tribe.

(iv) A candidate who already holds a Master's Degree may be exempted from the operation of the rule of securing minimum marks at the qualifying examination.

48. O.256 H.I be amended so as to read as follows:

"O.256 - H.I A candidate who has already passed the Diploma in Labour Law, Labour Welfare

and Personnel Management examination of the University may be permitted to appear at a subsequent examination without attending classes, in such paper (s) which he had not taken at the earlier examination and which are prescribed in the scheme of examination in force and, if successful, he will be given a Certificate to that effect. Such a candidate shall be required to obtain at least 48% marks in each paper for a pass.

A candidate who desires to enter for an examination under this Ordinance must submit his application on a prescribed form so as to reach the Registrar not later than the 1st October, or by the 15th of October if accompanied by a late fee of Rs. 10/—, or by 10th November, in case he is a collegiate candidate, preceding the date of examination. The application shall be accompanied by an examination fee of Rs. 20/— and a marks fee of Rs. 2/—, and shall be forwarded by the Principal of the college concerned.

In the case of a candidate whose application is rejected or who does not submit an application but only sends in the fees, the amount paid by the candidate on account of fees shall be refunded after deducting Rs. 2/—.”

49. O-65 IV: be amended so as to read as follows:

*For Teachers of Law:*

- (a) *Head of the Department for LL. B. classes who must be whole time :*

LL. M. With at least five years experience of teaching of classes for the degree of Bachelor of Laws,

- (b) *Head of the Department for LL.M. Classes who must be whole time :*

LL. M. With at least five years experience of teaching LL.M. Classes.”

- (c) *Whole time Lecturers for LL. B./LL. M. Classes:*

LL. M.

(d) *Part time Lecturers for LL.B. Classes.*

LL.B. With at least seven years practice at the Bar.

## 50. O.193 A: be amended so as to read as follows:

“O.193-A. A candidate who fails to secure at the immediately proceeding First year or Second Year of LL. B. (A) or First Year, Second Year or Third Year of LL B. (P) Examination of the University minimum percentage of marks in one paper only or in the aggregate or both (i.e. in the aggregate and in one paper); and has obtained not less than 48% marks in the aggregate of the five papers in which he has passed or in the case of candidate failing in aggregate only 48% marks in the aggregate of Five Papers excluding the paper in which he has secured the lowest marks shall be eligible to appear at the supplementary Examination in one paper only in which he has failed or in the case a candidate failing in aggregate only in the paper in which he has obtained the lowest marks to be held in the month of August. A candidate shall be declared to have passed the Supplementary examination if he obtains at least 36% marks in the paper in which he has appeared and 48% in the prescribed papers. For the purpose of determining division a candidate shall be deemed to have secured minimum pass marks only prescribed for that paper irrespective of the marks actually obtained by him; provided that on taking into account the minimum pass marks if the candidate falls short in the minimum aggregate prescribed for the award of Second Division, he shall be deemed to have secured the same.”

## 51. O. 257 be amended so as to read as follows:

O:257 : A Candidate who has passed the Bachelor of Laws ( Professional ) Degree Examination of the University of an examination of some other University recognised by the Syndicate as equivalent thereto securing a minimum of 55% marks in the aggregate shall be eligible to appear at the Master of Laws Degree Examination of this University after having undergone the prescribed course of study in an affiliated college.”

## 52. - O.329 M. 9 be amended so as to read as follows :

“Teachers, Inspecting officers, Librarians or Library clerks, Women candidates, Deaf, Physi-

cally handicapped candidates and Members of the Defence forces of India shall be eligible to appear at the Shastri and Acharya examinations as non-collegiate candidates in accordance with the provisions for B.A. and M.A. Examinations contained in Ordinances 170 to 192.

53-O.329 M 13 : be amended so as to read as follows:

“A candidate who has passed the Shastri Part II Examination or M.A. Examination in Sanskrit of the University or the Shastri Examination conducted by the Registrar, Departmental Examinations, Rajasthan or an Examination recognised as equivalent thereto and prosecuted a regular course of study for the Acharya.

Part I Examination for the academic year in a recognised institution shall be admitted to Acharya Part I Examination provided that a candidate who has passed M.A. Examination in Sanskrit shall be deemed eligible to appear at the Acharya Part I Examination in the subject in which he specialised in his M.A. Examination.”

XVII—Vide Syndicate Resolution No. 21 IV dated 17th April, 1971.

The existing provision at Sl. No. G & H of O.66 be replaced.

0.66 :

(G) *For Physical Training Instrutors in the Affiliated Colleges :*

- (A) For those who possess a Rs.300-25-500—  
Bachelor's Degree in 30-640.  
Physical Education or  
Bachelor's Degree with  
Diploma in Physical  
Education (at least one  
year course).
- (B) For those who possess Rs. 375-25-550—  
either a First or Second 30-850.  
Class Master's Degree in  
Physical Education or a  
First or Second class  
Master's Degree in Arts/  
Science/Commerce with  
a Diploma in Physical

Education (at least one year course).

*N.B.* : The condition of having obtained a First or Second Class at the Master's Degree examination will be waived in the case of present incumbents if they possess at least 5 years experience as Physical Instructors in a degree or post-graduate college.

{H} *For Librarians in the Affiliated Colleges :*

{A} For those who possess a Rs. 300-25-550—  
Bachelor's Degree with 30-644.  
a Degree or Diploma in  
Library Science (at least  
one year course).

{B} For those who possess Rs. 375-25-550—  
either a First or Second 30-850.  
class Master's Degree  
in Library Science or a  
First or Second class  
Master's Degree in Arts/  
Science/Commerce with  
a Diploma in Library  
Science (at least one year course).

*N.B.* : The condition of having obtained a First or Second class at the Master's Degree examination will be waived in the case of present incumbents if they possess at least 5 years experience of Librarianship in a degree or Post-graduate college.

XVIII—Vide Syndicate Resolution No. 36 dated 17th April, 1971.

Delete the following Note No. 3 occurring under O.141 B.

“Qualifications are relaxable at the discretion of the Selection Committee in special cases.

XIX. Vide Syndicate Resolution No. 39 and 45 dated 17th April, 1971.

Add under Sub Clause (c) of O.122 A.

(13) Rajasthan Canal Board Gold Medal for B.E. Final (Civil) Examination.

(14) Jaipur Metals and Electricals Limited Gold Medal for B.E. Final (Electrical) Examination.

XX—Vide Syndicate Resolution No. 20 dated 14th May, 1971.

1. Reworded the existing Note No. 4 occurring under para No. 1 of O.157 A.

(4) Re evaluation shall not be permitted in respect of (a) the examinations in the Faculty of Engineering & Technology and (b) the scripts of practical examinations and disseration/thesis etc.”

2. Introduce the following new Ordinance 242 C.

“0.242 C : In addition to the optional subjects prescribed for the Second and the Final Year T.D.C. Examinations, a candidate may, at his option, offer an ‘Additional Optional Paper’ in General English each at the Second Year and the Final Year Examinations subject to the following conditions :—

(1) Only those candidates will be allowed to offer this additional optional paper at the Second Year Examination who have already cleared the compulsory paper on General English prescribed for the First Year T.D.C. Examination either at the Main or at the immediately following supplementary examination.

(2) Only those candidates will be allowed to offer the additional optional paper in General English at the Final Year T.D.C. Examination who have already cleared the additional optional paper in General English prescribed for the Second Year T.D.C. Examination either at the Main or at the immediately following supplementary examination.

(3) Candidates who fail to clear the additional optional paper in General English at the

Final Year T.D.C. (Main) Examination shall be given one chance only to clear the same at the immediately following supplementary examinations.

- (4) An entry of having passed the additional optional paper in General English will be made in the Degrees of such candidates as have cleared both the additional optional papers viz., the one prescribed for the Second Year T.D.C. and the other for the Final Year T.D.C. Examination.
- (5) Candidates offering the additional Optional paper will be required to put in the same minimum attendance as is prescribed for other subjects of the Second Year and the Final Year T.D.C. Examinations.
- (6) The pass percentage in the additional optional paper will also be the same as prescribed for other subjects.

Note : The result of the additional optional paper in General English will not in any way effect the result of a candidate for the Second Year and/or the Final Year T.D.C. Commerce."

3. Amend second para of O.248, so as to read as follows :—

A candidate who after taking his B.A./B.Sc. degree of the University or of any other University recognised for the purpose by the Syndicate and obtaining at least 45% marks in the aggregate and at least 48% marks in the subject of Economics/Commerce/Business Administration has completed a regular course of study in an affiliated college for one academic year shall also be deemed eligible for admission to the Previous Examination for the Degree of Master of Commerce in (i) Economic Administration and (ii) Financial Management Groups."

4. O.241 in respect of the B.Com. Pass Course be re-written so as to read as follows :

O.241 (1) The subjects for the examination shall be as follows :



*Compulsory subjects : (For First Year Examination only).*

1. General English
2. General Hindi
3. Any one of the following :
  - (i) Mathematics
  - (ii) Industrial Psychology
  - (iii) Industrial Sociology
  - (iv) Indian Economic Administration
  - (v) History of Indian Civilisation and Culture.
  - (vi) Book-keeping—only for those who did not offer Commerce at the qualifying examination.

*Core Subjects :—*

1. Accountancy & Business Statistics.
2. Economic Administration & Financial Management
3. Business Administration.

*Optional Subjects : (Any one of the following)*

1. Costing & Quantitative Methods.
2. Labour and Industrial Relations.
3. Banking and Cooperation.
4. Steno-typing.

(2) A candidate failing in any one or even all the compulsory subjects as mentioned above at the First Year Examination will be allowed to continue his studies in the Second Year class, provided he passes in all the remaining subjects in the First Year examination. Such a candidate will have to clear the compulsory subjects in which he failed at the First Year examination in the immediately following three (Main or supplementary) examination and will be allowed to join the Final Year class only after he had cleared all the compulsory subjects. If a candidate passes the Second

Year Examination but again fail to clear the compulsory subject(s) his result of Second Year will be with held and released only after he has passed in all the compulsory subjects. Such a candidate shall be allowed two further chances to clear the failing compulsory subject(s) at the immediately following Main and Supplementary examinations and allowed admission to the Final Year T.D.C. class, provided that if he fails to clear them even in these two chances (inability to avail a chance shall be treated as failure), his First Year and Second Year T.D.C. Examinations shall stand cancelled.

(3) A candidate passing in any one or all the compulsory subjects shall not be required to re-appear in the same papers even if he has failed at the examination. Such a candidate may, however, at his option reappear at the First Year T.D.C. Examination as a whole, subject to the condition that his earlier performance in the aforesaid compulsory papers shall be treated as cancelled.

5. 0.193 : In the firstline of the Ordinance, read 'One Optional/core subject' instead of 'one optional subject.'

6. 0.165 : Clause (i) of the Ordinance be re-written so as to read as under :

- (i) to offer the same subjects in which he has attended a regular course of study in an affiliated college of the University: provided that (a) candidate for the First Year Examination of the B.A./B.Sc., may be allowed to change the Compulsory subject of General Education to Histoy of Indian Civilisation & Culture and Vice-versa, or one of the optional subjects last offered by him, (b) a candidate for the First Year examination of the B.Com. may be allowed to change the compulsory subject offered by him out of the subjects of (i) Mathematics, (ii) Industrial Psychology, (iii) Industrial Sociology (iv) Indian Economic Administration and (v) History of Indian Civilisation & Culture (c) a candidate for the Second Year Examination of B.Com may be allowed to change the optional subject last offered by him; and (d) a candidate for the previous examination

for M.A./M.Sc./M.Com. may be allowed to change one of the optional papers last offered by him, with the permission of the Vice-Chancellor, on the recommendation of the Principal of the college concerned. Such an application for change in the subject, duly recommended by the Principal of the College concerned, must reach the Registrar not later than the 31st July preceding the examination at which candidate wants to appear; the last date for receipt of such applications shall be 25th September in the case of candidates who fail at the Supplementary examinations."

7. 0.86 A :

- (I) In sub-clause (ii) of clause (1) of the Ordinance.
  - (a) Insrt 'Core' between the words—'in such' and 'Optional subjects' in the first sentence.
  - (b) Delete proviso beginning with the words 'Provided that' and ending with the words—'qualifying examination.'
- (II) In clause (2) of the Ordinance substitute. 'Core paper of Commerce' for Compulsory papers of Commerce' occurring in the second paragraph.
- (III) Substitute—( 'Financial Accounting' ) for ('Elements of Statistics)' in sub-para (a) of clause (4) of the Ordinance.
- (IV) In clause (4) of the Ordinance *delete* 'of General Hindi, General English and General Education/History of Indian Civilisation & Culture, wherever occurring in sub-para (a).
- (V) Clause (5) of the ordinance be re-written so as to read as under :—
 

"5 (i) Candidates who appeared at the First Year T.D.C. Examination of the University in the Compulsory and or Core/optional subjects under the aforesaid provision shall not be promoted to the Final Year T,D.C.

class until they have passed the First Year T.D.C. Examination in the required compulsory and or Core<sup>2</sup> optional subject and (ii) the attendance of such candidate as passed in the required Compulsory and or Core/ optional subjects at the supplementary examination will be counted from the date of their admission but not later than a week from the date of declaration of the Supplementary examination result."

8. Delete the following proviso occurring in O.215-I.  
 'Provided that a foreign student.....  
 .....without passing the  
 First Year Examination'.
9. (i) Add the following proviso to the O.234.  
 Provided that it will be necessary for a candidate seeking admission to the M. Sc. (Previous) Chemistry class to have already passed his B. Sc. examination with Mathematics as a compulsory or optional subject or to have cleared the Elementary Mathematics paper prescribed for First Year T.D.C. Science Examination of the University.
- (ii) Add the following new Note No. 6 under Ordinance 218.  
 A candidate who did not offer Elementary Mathematics or Optional Mathematics at the First Year T.D.C. examination may be allowed to offer Elementary Mathematics as an additional subject and appear in the Examination along with his IInd Year or IIIrd Year examination or in a subsequent year (Main or Supplementary Examination).
- (iii) O.234-Add the following sentence to Note No. (2).  
 "A candidate who successfully completes the B. Tech. Ed. Course of this University be considered eligible for admission to the M. Sc. Course in Physics.
10. Add within brackets in clause 6 against M. Com. in o.122 A (b)
  - (i) 'One medal each for the three Deptt. of Commerce'.
  - (ii) Add M.B.A. below M. Com.

11. The following sub-para (a) be deleted from o.192-1 and the rest paras be re-numbered :

“(a) No candidate shall be admitted to an examination of the University unless he has attained the minimum age prescribed for admission to that examination for regular students as per o.81-A.”

12. In o.194 the words—‘First Year or Second Year of LL. B. (A) or First Year Second Year or Third Year of LL. B. (P)’ be inserted between the words—‘in the rest at the end ‘Main examination.’
13. In o.196 the words—‘the supplementary examination’ be substituted for the words—‘an examination’ in the first sentence so as to make the Ordinance explicitly clear.
14. In 0.327 Insert the following between the words ‘B. Ed. Sc./Com./Agriculture/Home Science and/or Four Year B. Tech. Ed. Examination’.

For one year B.Ed. Languages (English/Hindi) or two years B.Ed. (Craft) Course Examination’.

15. In Chapter XXX, the existing heading ‘K-Correspondence Courses’ be re-worded as ‘K-Correspondence Courses for B.A./B.Com. (Pass Course)’.
16. In Chapter XXX, add the following new heading after o.199D-6 :—
- ‘L-Vacation-cum-Correspondance Course for B. Sc. (Pass Course)’.
17. Introduce the following new Ordinances :—
- o.199 D-7.* A candidate may obtain B.Sc. (Pass Course) degree of the University after successful completion of the vacation-cum-correspondence course provided by the Regional College of Education, Ajmer.

*o.199 D-8 :* A candidate for the B.Sc. vacation-cum-correspondence course shall be required to be admitted in the Regional College of Education, Ajmer. Only those Science teachers who have at least 5 years experience of School teaching and are recommended by the Director of Education, Director of Public Instruction of the State concerned will be admitted to this Course.

*o.199 D-9 :* The duration of the courses of study, the

syllabi and the scheme of examination for the B.Sc. Vacation-cum-Correspondence course shall be the same as for the B.Sc. (Pass Course) of the University.

*o.199 D-10 :* All Statutes, Ordinances, Regulations and Rules governing matters with regard to enrolment of students, admissions discipline, scholarships, medals and prizes, and examinations as applicable to the regular students of an affiliated college shall unless specified otherwise, apply to the students seeking admission to the Regional College of Education, Ajmer for the B.Sc. Vacation-cum-Correspondence Course.

*o.199-11 :* The Regional College of Education, Ajmer shall hold classes for teaching and practical work during the summer vacation from 16th April to 30th June and during Dusshera-Deewali break for a period of 10 days on the dates to be announced by the Principal. At least 8 periods, each of 45 minutes duration, will be provided on each working day so that the total number of periods per academic session shall be not less than 560. Instruction by correspondence shall be provided during the rest of the session.

*o.192 D-12 :* A candidate for the B.Sc. vacation-cum-correspondence course shall be required to attend at least 80% of the periods for theory/practical work failing which he will not be allowed to appear at the examination. The Principal of the Regional College of Education, Ajmer shall send to the University a list of such candidates as fail to comply with the above requirements at least 21 days before the date of the commencement of the examination."

18. Insert the following in O. 141 C.

*"Case Analyst in the Department of Business Administration."*

Same qualification as for a lecturer for M. B. A. Classes with specialisation/experience of case analysis.

0.65 (IX) be re-worded as follows :—

(A) *For Lecturers of Shastri Classes :*

(i) *For Teaching Main optional subjects :*

At least a second second class Acharya Degree in the subject concerned.

(ii) *For Teaching Samanya Sanskrit :*

At least a second class Acharya Degree in any subject.

(iii) *For Teaching General Hindi/General English :*

At least a second class Master's degree in the subject concerned.

(iv) *For Teaching optional subjects :*(a) *For Modern subjects :*

At least a second class Master's Degree in the subject concerned.

(b) *For Ancient subjects*

(i) For Phalit Jyotisha and Samanya Paurohitya—Atleast a second class Acharya Degree in the subject concerned.

(ii) *For Bhasha Vigyan and Sanskrit*

Bhasha Ka Itihas. A second class Master's Degree in Sanskrit.

(B) *For Lecturer of Acharya classes :*

A first class Acharya Degree in the subject, or a second class Acharya degree in the subject with 3 years experience of teaching Shastri classes, provided that for teaching the subject of literary and Cultural History of Ancient India and comparative Philology the basic qualification shall be at least a second class Master's Degree in Sanskrit.

(C) *For Heads of Acharya Departments :*

First Class Acharya Degree in the subject with five years teaching experience of Shastri and/or Acharya classes.

OR

Second Class Acharya Degree in the subject with five years experience of teaching (not below Shastri classes) out of which at least three years experience of teaching Acharya classes, provided that the condition of three years teaching experience of Acharya Classes, shall not apply in the case of a candidate who possess a recognised research degree.

Notes :—1. For the subject of Literary and Cultural History of Ancient India and Comparative Philology, the Head must posses the Master of Arts Degree in Sanskrit in place of Acharya Degree.

2. A person possessing both Acharya and M. A. in Sanskrit degrees shall be considered qualified to teach Shastri and Acharya classes if he has passed either of them in Second division, experience of teaching remaining the same.

20. 0. 65 XI (J) be reworded as follows :—

(1) *Principals for Acharya Colleges :*

At least a second class Acharya Degree with 10 years experience of teaching Acharya and/or Shastri Classes out of which at least five years as Head of Acharya Department of seven years as Principal of Shastri College.

(2) *Principals for Shastri Colleges :*

At least a second class Acharya Degree with a 8 years experience of teaching Acharya and/or Shastri Classes.

21. Add the following note under 0.65 XII—“Minimum qualifications for Librarians”—

Note : “For appointment to the post of Librarian in a College affiliated in the Faculty of Sanskrit Studies it will be necessary for a candidate to have passed his Bachelor of Arts Degree with Sanskrit as one of the Optional subjects.”

22. In o. 153-A. insert—‘and (iii) Acharya’ between the words—‘(ii) Master of laws’ and does not take the Final-Part II Examination.’

23. In O.153-B insert ‘Shastri’ between the word—‘B. Com.’ and ‘LL.B. (A).’

24. In the first para of 0.193 substitute I ‘(c) in the compulsory subjects of ‘Samanya Sanskrit or Samanya Hindi (in the case of Hindi speaking students) or any one of the optional subjects under Group II or III of 0.329M-11 at the First Year/Second Year/Final Year Shastri Examinations’ for ‘(C) the Shastri Examinations.’

25. The Note given below 0. 193 be re-written as follows :—  
“A candidate failing in (i) one or more compulsory subjects prescribed for the First Year T.D.C. Exami-



nation in the Faculties of Arts, Science and Commerce and (ii) the compulsory subjects of General English and Samanya Hindi prescribed for the First and Second Year Shastri Examinations respectively will be allowed to reappear in the failing subject(s) at the supplementary Examination subject to the conditions and limitation as prescribed in ordinances Nos. 200B and 204 (Faculty of Arts), 218 and 222 (Faculty of Science), 241 (Faculty of Commerce) and 329M-11 (Faculty of Sanskrit Studies)."

26. In the second para to 0.198 (1) insert—'the compulsory subjects of General English/Samanya Hindi at the First/Second Year Shastri Examination' between the works—'First Years T.D.C. Examination in Arts Science and Commerce' and 'put pass in other subjects'.
27. Ordinances Nos. 329M-10, 329M-11, 329M-12, 329M-13, 329M-14, and 329M-15 be re-written as follow :

*o. 329-M10 :*

The Courses of study for the Shastri Examination shall extend over a period of three years as an integrated course and there shall be an examination at the end of each year, namely, 'First Year Shastri Examination' at the end of first year, 'second Year Shastri Examination' at the end of second year and 'Final Year Shastri Examination' at the end of third year.

*o. 329 M-11 :*

The subjects for the examination shall be as follows :—

*Group I—Compulsory :*

- |                     |  |
|---------------------|--|
| 1. Samanya Sanskrit | To be offered in all the three examinations.       |
| 2. Samanya Hindi    | To be offered in the Second Year Examination only. |
| 3. General English  | To be offered in the First Year Examination only.  |

*Group II—Main optional :* one of the following :—

(subject to the condition given in Note (1) below :

1. Veda—One of the Four Veda, viz. Rigveda. Yajurveda, Samveda and Arthaveda(with practical)
2. Vyakarna
3. Sahitya
4. Samanya Darshan
5. Vedanta
6. Mimansa
7. Nyaya
8. Jyotish (with Practical)
9. Dharmashatra
10. Buddha Darshana
11. Jain Darshana
12. Paurohitya (with Practical)
13. Puranetihas.

*Group III—optional* : Any two of the following :

1. Hindi Sahitya
2. English Literature
3. Foreign Language (German or French or Russian or Persian)
4. History
5. Political Science
6. Economics
7. Statistics
8. Public Adminstration
9. Psychology
10. Sociology
11. Home Science.
12. Phalit Jyotisha )
13. Samanya Paurohitya )
14. Bhasha Vigyan and Sanskrit Bhasha ka itihis.

Only one of these  
can be offered.

*Note I* : Permission for offering one main optional subject for the Shastri Examination under Group II shall be given keeping in view the main subject offered by the candidate at the Upadhyaya Examination as indicated below :

<i>Main subject offered at the Upadhyaya Exam.</i>	<i>Main optional subject under Group II any one of which can be allowed to be offered.</i>
(1) Veda	Veda, Sahitya, Mimansa, Dharmashastra, Buddha Darshana, Paurohitya and Puranetihas.
(2) Vyakarna	Vyakarna, Sahitya, Samanya, Darshan, Vedanta, Mimansa, Dharmashastra, Jain Darshana, Buddha Darshana, Paurohitya and Puranetihas.
(3) Sahitya	Sahitya. Samanya Darshan, Vedana, Mimansa, Dharamshastra, Jain Darshana, Buddha Darshana, Paurohitya and Puranethihas.
(4) Mimansa	Sahitya, Samanya Darshan, Vedanta, Mimasa, Dharamshastra, Jain Darshana, Buddha Darshana, Paurohitya and Puranetihas.
(5) Nyaya	Sahitya. Samanya Darshana, Vedanta, Mimansa, Nyaya, Dharmashastra, Jain Darshana, Buddha Darshana, Paurohitya and Puranetihas.
(6) Vedanta	Sahitya, Samanya Dershan, Vedanta, Mimansa, Nyaya, Dharmnshastra Jain Darshan, Buddha Darshana, Paurohitya and Puranetihas.
(7) Jain Darashana	Sahitya, Samanya Dershan, Jain Darshana, Buddha Darshana and Puranetihas.
(8) Jyotish	Sahitya, Buddha Darshana, Paurohitya and Puranetihas.
(9) Dharmashastra	Sahitya, Samanya Dharshana, Vedanta, Mimansa, Dharma shastra, Jain, Darshan, Buddha Darshana, Paurohitya and Puranetihas.
(10) Paurohitya	Veda, Sahitya, Jyotish, Dharmashastra, Buddha Dharshna and Puranetihas.

- (11) Samanya Darshan : Sahitya Samanya Darshana, Vedanta, Mimansa, Nyaya, Dharmashastra, Jain Darshana, Buddha Darshana, Paurohitya and Puranatihasa.
- (2) Passing in the compulsory subject of General English prescribed for the First Year Shastri Examination will not be necessary for the Examinations of 1972, 1973 and 1974 but it will be necessary for a candidate to put in the required minimum attendance and to appear at the examination. If a candidate does not pass, he will be given five more chances in the immediately following main and supplementary examinations to clear the subject and, if successful, a mention to that effect will be made in his degree.
- (3) If a non-Hindi speaking candidate passes in all the subjects but fails in the compulsory subjects of Samanya Hindi at the Second Year Shastri Examination, he will be permitted to continue his studies in the Final Year class and given two more chances in the immediately following main and supplementary examinations to clear the same. If a candidate fails to clear the subject in these two chances (inability to avail a chance shall be treated as failure), his second year Shastri Examination shall stand cancelled.
- (4) A candidate who has once passed in the compulsory subject(s) shall not be required to appear in the same subject(s) again even if he has failed at the examination. However, if a candidate wishes to reappear in the examination as a whole, he will be permitted to do so but in that case his earlier performance in the compulsory subjects shall be treated as cancelled.

O.329 M-12 :

A candidate who, after passing the Upadhyaya Part I Examination of the Board of Secondary Education, Rajasthan or an examination recognised by the University as equivalent thereto, has attended a regular course of study in an affiliated college for one academic year shall be eligible to appear at the First Year Shastri Examination.

*O.329M-13 :*

A candidate who, after passing the First Year Shastri Examination of the University or the Upadhyaya Part II Examination of the Board of Secondary Education, Rajasthan or the Upadhyaya or Madhyama Examination conducted by the Registrar, Departmental Examinations, Rajasthan has attended a regular course of study in an affiliated college for one academic year shall be eligible to appear at the Second Year Shastri Examination, provided that a candidate appearing at the Second Year Shastri Examination after passing the Upadhyaya Part II Examination of the Board of Secondary Education, Rajasthan or the Upadhyaya or Madhyama Examination conducted by the Registrar, Departmental Examinations, Rajasthan shall be required to appear in the compulsory paper of General English prescribed for the First Year Shastri Examination in addition to the papers of the Second Year Shastri Examination.

*O.329 M-14 :*

A candidate who, after passing the Second Year Shastri Examination of the University, has attended a regular course of study in an affiliated college for one academic year shall be eligible to appear at the Final Year Shastri Examination.

Note :— A candidate who passes the Shastri Part I Examination of the University in 1971 shall be eligible to appear at the Shastri Part II Examination of 1972 under the Ordinances and Regulations of the University in force during the session 1970-71. The Syllabus shall be the same as prescribed by the Registrar, Departmental Examinations, Rajasthan, for the Examination of 1971.

*O.329M-15 :*

A candidate who has passed the Shastri Examination of the University or the Shastri Examination conducted by the Registrar, Departmental Examinations, Rajasthan shall be eligible to appear at the Shastri Examination in any subsequent year in one or at the most two more optional subjects—Main

optional and/or optional prescribed for the examination and not already taken by him. A candidate who has passed the B.A. examination of the University with Sanskrit as an optional subject shall be eligible to appear at the Shastri Examination in any subsequent year in the main optional subject of Sahitya. Permission to appear in the additional optional subject (s) will be given if the candidate is not registered for any other examination of the University in the same year. Such a candidate shall be required to appear in all the papers of the subject(s) offered by him in one and the same year and, if successful, a certificate to that effect will be given to him.

A candidate who desires to enter for an examination under this Ordinance must submit his application on a prescribed form so as to reach the Registrar not later than 15th of September, October 1 for candidates who appear at the supplementary Examination or by the 15th of October, if accompanied by a late fee of Rs. 10/— or by 1st November in case he is a college candidate preceding the date of examination. The application shall be accompanied by an examination fee of Rs. 20/— per subject and a marks fee of Rs. 2/— and shall be forwarded by the Principal of the College concerned or other competent authority who forwarded the candidate's original application for permission to appear at the examination.

In the case of a candidate whose application is rejected or who does not submit an application but only sends in the fees the amount paid by the candidate on account of fees shall be refunded after deducting Rs. 2/—.

28—O.329 M-24 be re-written as follows :

*O.329 M-24 :*

The examination for the degree of Acharya will consist of specialised courses in the following subjects :—

1. One of the 4 Vedas (With practical on each)
2. Vyakarana
3. Sahitya

4. Samanya Darshana
5. Vedanta
6. Mimansa
7. Nyaya
8. Jyotish (with practical)
9. Jain Darshana
10. Buddha Darshana
11. Paurohitya (with practical)
12. Dharmashastra
13. Puranetihas
14. Agama
15. Vastu & Shilp
16. Pali & Prakrit

N. B. : Literary and Cultural History of Ancient India and comparative Philology will form a compulsory part of the courses of each subject.

- (2) Introduce the following new O.329 M-25 and re-number the existing O.329 M-25-regarding Vidya-Varidhi Examination as O.329-M-26 :—

*O.329 M-25 :*

A candidate who has passed the Acharya Examination of the University or the Acharya Examination conducted by the Registrar, Departmental Examinations, Rajasthan in any subject shall be eligible to appear or examination in another subject not taken by him at the said examination and, if successful, will be awarded a Degree to that effect; provided that :

- (a) A candidate who has already passed Acharya Examination with Vyakarna or Nyaya shall be eligible to offer Sahitya or Dharmashastra or Samanya Darshana or Jain Darshan or Buddha Darshana only.
- (b) A candidate who has already passed Acharya examination with Samanya Darshana shall be eligible to offer Dharmashastra or Jain Darshana or Buddha Darshana only.

- (c) A candidate who has already passed Acharya Examination in any subject except Vyakarana, Nyaya or Samanya Darshan shall be eligible to offer any subject for the Acharya Examination or the University other than the subjects of Veda, Vyakarna, Nyaya, Jyotish and Mimansa.

(29) O.329N-3 be re-written so as to read as follows:

O.329 N-3 :—A candidate who after passing the upadhyaya Examination with English of the Board of Secondary Education, Rajasthan or the Pre-University Examination with Sanskrit as an optional subject of University or an examination recognised by the University as equivalent thereto with Sanskrit as an optional subject, has attended a regular course of study in an affiliated Ayurvedic College for one academic year shall be eligible for admission to the Pre-Ayurvedic examination.

(30) In O.329N-4, substitute '16 years' for '15 years'.

(31) O.329N-11 (a) be re-written so as to read as follows :—

O.329N-11 (a); A candidate who after passing the Pre-Ayurvedic examination of the University has attended a regular course of study in an affiliated Ayurvedic college for one and a half academic year shall be eligible for admission to the First Ayurvedacharya examination,

- ( XXI ) (Vide Syndicate resolution No. 21 dated 14th May, 1971)

Delete the following Note No. 7 occurring under O.141. C.

“Qualifications are relaxable at the discretion of the selection committee in the Special cases.”

- (XXII) Vide Syndicate resolution No. 27 dated the 14th May, 1971.

- ( i ) The proposed Ordinances Nos. 238E-9 and 238E-10 be re-written so as to read as under :

“O.238E-9 :

In the fourth year, a candidate will be allowed to take Honours course provided he has passed the Third Year Examination getting a minimum of 50% marks in the aggregate; otherwise he will be allowed to take the subjects for pass course only.



The candidate for the Fourth Year Examination shall be examined in the following subjects :

*A—Theory (Part I)*

Common for Pass and Honours students.

- (a) Workshop in Teaching
- (b) Foundations and Problems of Education.
- (c) Applied Sciences—

Any one of the following :

- ( i ) Agriculture appliances
- ( ii ) Electronics
- ( iii ) Production Processes.
- ( iv ) Ceramics.
- ( v ) Fruit and Seed Production and Fruit Preservation.
- (vi ) Book-keeping and Cattle Management
- (vii ) Milk Products and Milk Testing.

*for Honours students only*

( d ) Honours subject—one of the following

- ( i ) Mathematics
- ( ii ) Chemistry
- (iii) Physics
- (iv) Botany
- (v ) Zoology

*B. Practical II*

Common for Pass and Honours students—

- (a) Applied Science—as in theory at (c) above.

*for Honours students only—*

(b) Honours subject—One of the following :

- ( i ) Chemistry
- (ii ) Physics
- (iii) Botany
- (iv) Zoology.

C—Internship in Teaching (Common for Pass and Honours students).

*O.238E-10 :*

In order to pass at the B. Sc. (Pass) B. Ed. Examination a candidate should obtain a minimum of 36% marks in each subject, in theory and practical separately as well as in internal assessment and external examination separately; and he should also obtain a minimum of 36% marks in Internship Teaching.

In order to qualify for the B. Sc. (Hons.) B.Ed. Degree a candidate should obtain—

- (a) the minimum pass marks in the subjects for pass Course,
- (b) a minimum of 36% marks in theory and practical separately as well as in internal assessment and external examination separately and 50% in the aggregate in the Honours subject, and
- (c) a minimum of 48% marks in the aggregate of all the four examinations to be worked out in the manner stated hereinafter in this Ordinance.

A candidate who appears at the B. Sc. (Hons.) B.Ed. Examination and passes in all the subjects but obtains less than 50% marks in the Honours subject shall be awarded the B.Sc. (pass) B.Ed. degree and placed in an appropriate division. Further, if a candidate for the B.Sc. (Hons.) B.Ed. Examination does not obtain at least 48 p.c. marks in the aggregate of all the four examinations to be worked out as indicated below, he will be awarded only a B. Sc. (Pass) B. Ed. degree and placed in the Third Division even if he has obtained more than 50% marks in the Honours subject.

Division will be awarded to successful candidates at the end of the Fourth Year Examination and the following aggregate of marks will be taken into consideration for the purpose :

- 20% of the aggregate in the First Year.
- 30% of the aggregate in the Second Year.
- 100% of the aggregate in the Third Year.
- 100% of the aggregate in the Fourth Year.

Separate division shall be awarded for Internship Teaching.

Successful candidates will be awarded divisions as under :—

*for B.Sc. (Hons.) B.Ed.*

First Division— 60% or more in the aggregate of Pass and Honours subjects.

Second Division—48% or more but less than 60% in the aggregate of pass and Honours subjects.

*For B.Sc. (Pass) B. Ed.*

First Division— 60% or more in the aggregate.

Second Division—48% or more but less than 60%

Third Division—36% or more but less than 48% in the aggregate.

A candidate who appears at the Fourth Year B. Sc. (Honours) B. Ed. Examination and passes in all the subjects of the B.Sc. (Pass) B. Ed. course but fails in the Honours subject will be declared to have passed the B. Sc. (Pass) B. Ed. Examination and his division will be worked out on the basis of the marks obtained by him in the subjects of the B. Sc. (Pass) B.Ed. Examination.

- (2) The existing Ordinances Nos. 238-E to 238E-11 and 231 F to 238F-8 be *deleted*, and instead the following new ordinances Nos. 238E to 238E-12 be introduced :—

Four-Year Teacher Education Course in Science Leading to the Degree of B. Sc. (Hons.) B. Ed. and B. Sc. (Pass) B.Ed.

O.238 E. The courses of study shall extend over a period of Four Years as an integrated course in Science and Education leading to the degree of Bachelor of Science (Honours/Pass) and Bachelor of Education (B.Sc. Honours/Pass B.Ed.). There shall be a University Examination at the end of each year.

O.238E-1: The Examination shall be conducted by means of written papers and practical tests wherever required. A regular record of the internal assessment of each candidate shall be maintained by the Principal of the College and sent to the Registrar of the University by the 31st of March at the latest.

O.238E-2: A candidate who, after passing the Pre-University Examination of the University or the Higher Secondary Examination of a recognised Board or any other examination recognised by the University as equivalent thereto, with Physics, Chemistry, Biology or Mathematics has completed a regular course of study at the Regional College of Education, Ajmer or any other college affiliated to the University for the purpose for one academic year will be eligible for admission to the First Year Examination.

O.238E-3: Every candidate for the First Year Examination shall be examined in the following subjects :

*THEORY ( Part I )*

- (a) English
- (b) Regional Language
- (c) Engineering Drawing
- (d) Physics
- (e) Chemistry
- (f) Biology or Mathematics.

*PRACTICAL ( Part II ) :*

- (a) Physics
- (b) Chemistry
- (c) Biology (for those who opt for Biology)

(2 practicals—One is Botany and one in Zoology).

O 238E-4: A candidate who after passing the First Year Examination of the Course has completed a regular

course of study at the Regional College of Education, Ajmer or any other College perusing the same course affiliated to the University for the purpose for one academic year will be eligible for admission to the Second Year Examination.

*O.238E-5:* Every candidate for the Second Year Examination shall be examined in the following subjects :

*THEORY ( Part I )*

- (a) Psychological Foundation of education.
- (b) Methods of teaching Science.
- (c) Any one of the following combinations :

Physics, Chemistry and Mathematics

Or

Chemistry, Zoology and Botany

*PRACTICAL ( Part II )*

- (a) Physics and Chemistry

Or

- (b) Chemistry, Zoology and Botany.

*O.238E-6:* A candidate who after passing the Second Year Examination of the course has attended a regular course of study at the Regional College of Education, Ajmer or any other College persuing the same course affiliated to the University for the purpose for one academic year shall be eligible for admission to the Third Year Examination.

*O.238E-7:* Every candidate for the Third Year Examination of the Course shall be examined in the following subjects :

*THEORY ( Part I )*

- (a) Workshop in Teaching
- (b) One of the following combinations :  
Physics, Chemistry and Mathematics

Or

Chemistry, Zoology and Botany.

*PRACTICAL ( Part II )*

- |                       |   |                          |
|-----------------------|---|--------------------------|
| (a) Workshop Practice | } | for Mathematics<br>Group |
| Physics               |   |                          |
| Chemistry             |   |                          |
| (b) Agriculture       | } | for Biology<br>Group     |
| Chemistry             |   |                          |
| Zoology               |   |                          |
| Botany                |   |                          |

N. B. 1 :

Though the examination in the subjects of workshop Practice and Agriculture will be held at the end of the Third Year, yet the Teaching in these subjects shall start in the Second Year.

2 : Candidate will have to offer any one of the following three groups of Agriculture (Practical) :—

- (i) Plant Protection and Poultry Production.
- (ii) Vegetable Production & floriculture and Fruit Plant propagation and Nursury raising.
- (iii) Manures and Fertilizers soil testing etc. etc.

O.238 E-8 A candidate who after passing the Third Year Examination of the course has attended a regular course of study at the Regional College of Education, Ajmer for any other college persuing the same course affiliated to the University for the purpose of one academic year will be eligible for admission to the Fourth Year examination.

o.238E-9 : Every candidate for the fourth year Examination of the course shall be examined in the following subjects :

A. *Theory (Part—II)*

- (a) Workshop in Teaching.
- (b) Foundations & Problems of Education.
- (c) APPLIED Science—one of the following :
  - (i) Agriculture Applications for Mathes.  
Physics & Chemistry Hons.Students.

- (ii) Electronics for Physics and Maths. (Hons.)
  - (iii) Production Processes for Physics and Maths (Hons.)
  - (iv) Ceramics for Chem. (Hons.)
  - (v) Fruit & Seed production & Fruit preservation for Botany Hons.
  - (vi) Bee-keeping and Cattle management for Zoology (Hons.)
  - (vii) Milk products & milk testing for Chemistry Hons.
- (d) Honours subject—one of the following :
- Mathematics.
  - Physics.
  - Chemistry.
  - Botany.
  - Zoology.

B. *Practical (Part—II)*

- (a) Applied Science—As in Theory at (c) above.
- (b) Honours subject—one of the following :

  - Physics.
  - Chemistry.
  - Botany.
  - Zoology.

C. *Internship Teaching.*

O.238 E-10 : For a pass at any examination a candidate shall be required to secure at least 36% marks in a subject both in its Theory and practical parts separately. He will also be required to pass separately in Internal and External Assessment, minimum pass marks being 36%.

Division will be awarded to a successful candidate at the end of the Fourth Year Examination, and the following

aggregate of marks will be taken into consideration for the purpose :

20% of the aggregate in the First Year.

30% of the aggregate in the Second Year.

100% of the aggregate in the Third Year.

100% of the aggregate in the Fourth Year.

Separate division shall be awarded for Internship Teaching.

Successful candidate will be classified into three divisions as under :

First Division	60% or more
Second Division	48% or more but less than 60%
Third Division	36% or more but less than 48%

Successful candidates securing 50% or more marks in the Honours subject at the Fourth Year Examination shall be awarded the degree of B.Sc. (Hons.) B.Ed. and those securing less than 50% marks in the Honours subject shall be awarded the degree of B.Sc. (Pass) B.Ed.

*O.238 E-II :*

There shall be in the month of August a supplementary examination for the First second. Third and Fourth Year Examination. A candidate who passes in the Internal Assessment and also in Internship Teaching in the case of the Fourth Year but fails in the External Assessment of Theory/and/or Practical of not more than two subjects shall be eligible to appear at the supplementary examination in the subject(s) in which he fails. In case a candidate is not able to pass even at the supplementary examination he shall be required to appear in all the subject again as an ex-student or a regular student. Such candidates shall, however, not be allowed to appear at more than two subsequent examinations.

A candidate who fails in the Practical Part at the Main Examination shall be required to appear in corresponding Theory part also at



the supplementary examination. A candidate who passes in the Practical Part but fails in the Theory Part of a subject at the Main Examination shall not be required to appear again in the Practical Part at the Supplementary examination. The Marks of Internal Assessment at the Main Examination shall be carried over for the purpose of Supplementary Examination.

Candidates passing at the supplementary examination either in the First Year and, or in the Second, Third and Fourth Year examination shall not be awarded any division and they will be declared to have obtained a pass class. The minimum pass marks for the supplementary examination shall be the same as prescribed for the Main Examination.

O.238 E—12 :

Notwithstanding anything contained in the above Ordinances, Honours Degree shall not be awarded to a candidate who clears the Fourth Year examination in more than two attempts, but he will be awarded B.Sc. (Pass) B.Ed. degree.

XXIII Vide Syndicate resolution No. 33 dated 14th May, 1971.

Delete the following in the schedule attached to O.352.

“4 D—Class IV servants — Rs. 1/—per day.”

विश्वविद्यालय कार्यालय में दिनांक 9 अप्रैल, 1971 को  
मध्याह्न 12-00 बजे सम्पन्न संस्कृत अध्ययन संकाय  
की बैठक का कार्य विवरण

उपस्थित

1. श्री पुरुषोत्तम लाल भार्गव, डीन (अध्यक्ष)
2. श्री दिगम्बर भा
3. श्री केशव ठाकुर
4. „ सूर्यनारायण भा
5. „ सुखदेव पाठक
6. „ घनश्याम शास्त्री
7. „ तृप्तिनारायण भा
8. „ उमेश चन्द्र शास्त्री
9. „ मथुराप्रसाद उपाध्याय
10. „ खंगनाथ मिश्र
11. „ विद्याधर शास्त्री
12. „ गरुडेशदत्त शास्त्री
13. „ हरिश्चन्द्र लाटा
14. „ दामोदर शास्त्री भारद्वाज
15. „ सदाशिव पाठक
16. „ राधाकृष्ण दीक्षित
17. „ मुनीश्वर दत्त शास्त्री
18. „ विश्वनाथ मिश्र
19. „ दयानन्द शास्त्री
20. „ रामेश्वरजी ठाकुर
21. „ मांगीलाल शास्त्री
22. „ श्यामनन्दन मिश्र
23. „ मदनलाल डोलिया
24. „ शिवलाल द्विवेदी
25. „ रामसुख पंचोली
26. „ गंगाधर द्विवेदी
27. „ दुर्गादत्त शर्मा
28. „ मांगीलाल योगी
29. „ डॉ० ब्रह्मानन्द शर्मा
30. „ नटवर लाल जोशी
31. „ नन्दकुमार शास्त्री
32. „ छोटेलाल मिश्र
33. „ रामनारायण चतुर्वेदी
34. „ रामशंकर द्विवेदी
35. „ नरोत्तम चतुर्वेदी
36. „ रामस्वरूप त्रिवेदी
37. „ गोविन्दनारायण शर्मा
38. „ एल. एल. जोशी
39. „ मोतीलाल जोशी

(विशेष रूप से आमन्त्रित)

संकाय की दिनांक 5 जनवरी, 1971 की गत बैठक के कार्य विवरण की पुष्टि की गई ।

(2) संस्कृत बोर्ड ऑफ स्टडीज पर श्री रामनारायण चतुर्वेदी व श्री मोतीलाल जोशी (जो अब बोर्ड के सदस्य नहीं रहे हैं) के स्थान पर उनके अवशिष्ट कार्यालय के लिए दो सदस्यों की नियुक्ति आगामी बैठक के लिए स्थगित कर दी गई।

(3) संकाय ने इस प्रश्न पर विचार किया कि उपाध्याय अथवा तत्सम परीक्षोत्तीर्ण छात्र को शास्त्री परीक्षा में किन विषय/विषयों को लेने की अनुमति प्रदान की जानी चाहिए।

इस सम्बन्ध में जुलाई, 1971 से लागू किये जाने वाले त्रिवर्षीय पाठ्यक्रम को ध्यान में रखते हुए संकाय ने संस्तुति करने का निश्चय किया कि उपाध्याय प्रथम। द्वितीय खण्ड परीक्षा में लिए गये मुख्य विषय को ध्यान में रखते हुए शास्त्री परीक्षा के लिए वर्ग 2 के अन्तर्गत वैकल्पिक मुख्य विषय के चयन की अनुमति निम्न प्रकार से दी जावे—

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उपाध्याय परीक्षा में लिया गया विषय	शास्त्री परीक्षा के वर्ग 2 के अन्तर्गत मुख्य वैकल्पिक विषय जिनमें से कोई एक लिया जा सकता है
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|------------|---|
| 1. वेद     | वेद साहित्य, मीमांसा, धर्मशास्त्र, बौद्ध दर्शन, पौरोहित्य तथा पुराणेतिहास   |
| 2. व्याकरण | व्याकरण। साहित्य, सामान्य दर्शन, वेदान्त, मीमांसा, धर्मशास्त्र, जैन दर्शन, बौद्ध दर्शन, पौरोहित्य तथा पुराणेतिहास |
| 3. साहित्य | साहित्य, सामान्य दर्शन, वेदान्त, मीमांसा, धर्मशास्त्र, जैन दर्शन, बौद्ध दर्शन, पौरोहित्य तथा पुराणेतिहास          |
| 4. मीमांसा | साहित्य, सामान्य दर्शन, वेदान्त, मीमांसा, धर्मशास्त्र, जैन दर्शन, बौद्ध दर्शन, पौरोहित्य तथा पुराणेतिहास          |
| 5. न्याय   | साहित्य, सामान्य दर्शन, वेदान्त, मीमांसा, न्याय, धर्मशास्त्र, जैन दर्शन, बौद्ध दर्शन, पौरोहित्य तथा पुराणेतिहास   |

- |                   |  |
|-------------------|--|
| 6. वेदान्त        | साहित्य, सामान्य दर्शन, वेदान्त<br>मीमांसा, न्याय, धर्मशास्त्र, जैन दर्शन,<br>बौद्ध दर्शन, पीरोहित्य तथा पुराणे-<br>तिहास  |
| 7. जैन दर्शन      | साहित्य, सामान्य दर्शन, जैन दर्शन,<br>बौद्ध दर्शन, तथा पुराणेतिहास   |
| 8. ज्योतिष        | साहित्य, ज्योतिष, बौद्ध दर्शन,<br>पीरोहित्य तथा पुराणेतिहास  |
| 9. धर्मशास्त्र    | साहित्य, सामान्य दर्शन, वेदान्त,<br>मीमांसा, धर्मशास्त्र, जैन दर्शन, बौद्ध<br>दर्शन, पीरोहित्य तथा पुराणेतिहास             |
| 10. पीरोहित्य     | वेद, साहित्य, ज्योतिष, धर्मशास्त्र,<br>बौद्ध दर्शन, पीरोहित्य तथा पुराणे<br>तिहास  |
| 11. सामान्य दर्शन | साहित्य, सामान्य दर्शन, वेदान्त,<br>मीमांसा, न्याय, धर्मशास्त्र, जैन दर्शन,<br>बौद्ध दर्शन, पीरोहित्य तथा पुराणे-<br>तिहास |

(4) संकाय ने प्रिंसिपल, महाराज संस्कृत कालेज, जयपुर के पत्रांक 3958 दिनांक 29-12-70 तथा प्राचार्य, श्री सरस्वती विद्यापीठ, कोटा के पत्रांक 31/70-71/254 दिनांक 31-3-71 के द्वारा प्रेषित निम्नलिखित प्रस्तावों पर विचार किया—

प्रिंसिपल, महाराज संस्कृत कालेज, जयपुर के प्रस्ताव

(अ) जिस छात्र ने किसी एक विषय में शिक्षा विभाग, राजस्थान की शास्त्री परीक्षा उत्तीर्ण कर ली है यदि वह छात्र किसी अन्य स्व विषय की शास्त्री परीक्षा उत्तीर्ण करना चाहें तो उसे केवल स्व विषय के पत्रों की ही परीक्षा देने की अनुमति दी जानी चाहिए ।

(आ) राजस्थान शिक्षा विभाग शास्त्री परीक्षोत्तीर्ण छात्र को केवल अन्य वैकल्पिक विषय की परीक्षाओं में प्रविष्ट होने की अनुमति प्रदान की जानी चाहिए ।

- (इ) भारतवर्ष की किसी भी स्वीकृत विश्वविद्यालय से संस्कृत में एम० ए० परीक्षोत्तीर्ण छात्र को इस विश्वविद्यालय की साहित्याचार्य परीक्षा में प्रविष्ट होने की अनुमति प्रदान की जानी चाहिए ।

प्राचार्य, श्री सरस्वती विद्यापीठ, कोटा के प्रस्ताव

- (ई) विश्वविद्यालय हैण्ड बुक पार्ट II के अध्यादेश 329 एम-12 में एक और अधिक संस्कृत विषय के स्थान पर 'एक और अधिक विषय' लिखा जाय ।
- (उ) संस्कृत वैकल्पिक विषय लेकर बी० ए० परीक्षा उत्तीर्ण करने वालों को केवल साहित्य मुख्य विषय लेकर शास्त्री परीक्षा में प्रविष्ट होने की अनुमति प्रदान की जाय ।

संस्तुति करने का निश्चय किया कि—

- (क) प्रस्ताव (अ), (आ) तथा (ई) के सन्दर्भ में अध्यादेश 329 एम-12 में संशोधन कर राजस्थान शिक्षा विभाग की शास्त्री परीक्षोत्तीर्ण छात्र को किसी एक और अथवा दो वैकल्पिक विषयों में प्रविष्ट होने की अनुमति प्रदान करने का प्रावधान किया जाय ।
- (ख) प्रस्ताव (इ) स्वीकार न किया जाय ।
- (ग) प्रस्ताव (उ) स्वीकार कर लिया जाय तथा नियमों में आवश्यक प्रावधान कर दिया जाय ।

{5} संकाय ने श्री मोतीलाल जोशी, भूतपूर्व प्राचार्य, राजकीय धूलेश्वर संस्कृत महाविद्यालय, मनोहरपुर के पत्र दिनांक 2-1-1971 के द्वारा प्रेषित विश्वविद्यालय हैण्ड बुक पार्ट II के अध्यादेश 65 में निर्धारित संस्कृत अध्ययन संकाय में प्राचार्य, विभागाध्यक्ष । आचार्य एवं अध्यापक पदों की न्यूनतम योग्यताओं में संशोधन करने के प्रस्ताव पर विचार किया ।

इस सम्बन्ध में श्री उमेशचन्द्र जर्मा द्वारा बैठक में प्रस्तुत इस प्रस्ताव पर भी विचार किया गया कि आचार्य एवं संस्कृत में एम. ए. दोनों परीक्षाओं में उत्तीर्ण व्यक्ति किसी एक में भी द्वितीय श्रेणी में उत्तीर्ण हुआ हो तो उसे शास्त्री एवं आचार्य कक्षाओं में अध्यापन के योग्य समझा जाय !

संस्तुति करने का निश्चय किया कि—0-65 IXm, 0-65 XI-J तथा 0-65 XII में निम्नलिखित संशोधन किये जाय—

0-65 (IX) be re-worded as follows ;—

(A) *For Lecturers of Shastri Classes :*

(i) *For Teaching Main Optional subjects :*

Atleast a second class Acharya Degree in the subject concerned.

(ii) *For Teaching Samanya Sanskrit :*

At least a second class Acharya Degree in any subject.

(iii) *For Teaching General Hindi/General English :*

Atleast a second class Master's Degree in the subject concerned.

(iv) *For Teaching Optional subjects :*

(a) *For Modern subjects :*

Atleast a second class Master's Degree in the subject concerned.

(b) *For Ancient subjects :*

(i) *For Phalit Jyotisha and Samanya Paurohitya—Atleast a second class Acharya Degree in the subject concerned.*

(ii) *For Bhasha Vigyan & Sanskrit Bhasha Ka Itihas. A second class Master's Degree in Sanskrit.*

(B) *For Lecturers of Acharya Classes :*

Atleast a second class Acharya Degree in the subject ; with three years experience of teaching Shastri Classes, provided that a candidate who holds a recognised research Degree will be considered eligible with two years experience of teaching Shastri Classes and provided further that for teaching. the subject of Literary and Cultural History

of Ancient India and comparative Philology the basic qualification shall be at least a second class Master's Degree in Sanskrit.

(C) *For Heads of Acharya Departments :*

First Class Acharya Degree in the subject with five years teaching experience of Shastri and/or Acharya classes.

OR

Second Classes Acharya Degree in the subject with five years experience of teaching (not below Shastri classes) out of which at least three years experience of teaching Acharya classes, provided that the condition of three years teaching experience of Acharya Classes, shall not apply in the case of a candidate who possesses a recognised research degree.

*Notes:—*1. For the subject of Literary and Cultural History of Ancient India and Comparative Philology, the Head must possess the Master of Arts Degree in Sanskrit in place of Acharya Degree.

2. A person possessing both Acharya and M. A. in Sanskrit degrees shall be considered qualified to teach Shastri and Acharya classes if he has passed either of them in Second division, experience of teaching remaining the same.

0.65 XI (J) be reworded as follows :

(1) *Principals for Acharya Colleges :*

Atleast a second class Acharya Degree with 15 years experience of teaching Acharya and/or Shastri Classes out of which atleast five years as Head of Acharya Department of seven years as Principal of Shastri College.

(2) *Principals for Shastri Colleges :*

Atleast a second class Acharya degree with 8 years experience of teaching Acharya and/or Shastri Classes.

III Add the following note under 0.65 XII-  
“Minimum qualifications for Librarians”—

*Note:*—“For appointment to the post of Librarian in a College affiliated in the Faculty of Sanskrit Studies it will be necessary for a candidate to have passed his Bachelor or Arts Degree with Sanskrit as one of the Optional Subjects”

(6) संकाय ने बैठक में प्रस्तुत किये गये इस प्रस्ताव पर विचार किया कि शास्त्री तथा आचार्य परीक्षाओं के लिए प्रत्येक विषय से परीक्षकों का एक नया पैनल बनाया जाय तथा इस हेतु संस्कृत अध्ययन बोर्ड ऑफ स्टेडीज के विचारार्थ अध्यापकों से आवेदन-पत्र आमन्त्रित किये जाय ।

संस्तुति करने का निश्चय किया कि उपरोक्त प्रस्ताव स्वीकार कर लिया जाय ।

(7) संकाय ने संस्कृत अध्ययन बोर्ड ऑफ स्टेडीज तथा उसके द्वारा नियुक्त उप-समिति की निम्नलिखित बैठकों में की गई संस्तुतियों पर विचार किया—

- (1) बोर्ड ऑफ स्टेडीज की बैठक दिनांक 5 फरवरी, 1971  
(परिशिष्ट-ए)
- (2) बोर्ड ऑफ स्टेडीज की बैठक दिनांक 25 एवं 26 मार्च, 1971  
(परिशिष्ट-बी) तथा बोर्ड ऑफ स्टेडीज द्वारा नियुक्त उप-समिति की बैठक दिनांक 17 व 18 मार्च, 1971  
(परिशिष्ट-सी)
- (3) बोर्ड ऑफ स्टेडीज की बैठक दिनांक 8 अप्रैल, 1971  
(परिशिष्ट-डी)

संस्तुति करने का निश्चय किया कि—

(क) वर्तमान द्विवर्षीय पाठ्यक्रम के स्थान पर शास्त्री परीक्षा के लिए जुलाई 1971 से त्रिवर्षीय पाठ्यक्रम लागू किया जाय ।



- (ख) बोर्ड ऑफ स्टेडीज ने अपने निश्चय संख्या 2 दिनांक 5 फरवरी, 1971 एवं निश्चय संख्या 1 (क), 1 (ख) तथा 3 दिनांक 25/26 मार्च, 1971 के द्वारा जो त्रिवर्षीय शास्त्री परीक्षा योजना प्रस्तुत की है उसे स्वीकार कर लिया जाय । किसी भी विषय में सफलता प्राप्त करने के लिए सैद्धान्तिक तथा प्रायोगिक परीक्षा में पृथक्-पृथक् न्यूनतम 25 प्रतिशत अंक तथा दोनों में मिलाकर 36 प्रतिशत अंक प्राप्त करना अनिवार्य होगा ।
- (ग) बोर्ड ऑफ स्टेडीज ने शास्त्री परीक्षाओं के लिए अपने निश्चय संख्या 2 दिनांक 25/26 मार्च, 1971 के द्वारा जो पाठ्यक्रम प्रस्तावित किया है उसे परिशिष्ट (ई) में दिये गये संशोधनों सहित स्वीकार कर लिया जाय ।
- (घ) बोर्ड ऑफ स्टेडीज ने अपने निश्चय संख्या 4 दिनांक 25/26 मार्च, 1971 के द्वारा आचार्य परीक्षाओं के लिए जो परीक्षा योजना तथा पाठ्यक्रम प्रस्तावित किया है उसे परिशिष्ट (एफ) में दिये संशोधनों सहित स्वीकार कर लिया जाय ।
- (ङ) बोर्ड ऑफ स्टेडीज की दिनांक 5 फरवरी, 1971 की बैठक में आचार्य परीक्षा सम्बन्धी अध्यादेश 329 एम-14 में प्रस्तावित संशोधन के स्थान पर डॉक्टर पी. एल. भार्गव के पत्रांक 465 दिनांक 16 मार्च, 1971 के अनुसार अध्यादेश 329 एम-24 के नीचे निम्नलिखित नोट जोड़ दिया जाय—

Literary and Cultural History of Ancient India comparative Philology will form a compulsory part of the courses in each subject.

- (च) बोर्ड ऑफ स्टेडीज की संस्तुति संख्या 1 दिनांक 8 अप्रैल, 1971 पर विचार कर निश्चय किया कि अध्यादेश 329 एम-9 को ध्यान में रखते हुए अध्यादेश 170 से 192 में कोई संशोधन आवश्यक नहीं है । अन्य अध्यादेश जो सामान्य रूप से सभी संकायों के लिए हैं, वे संस्कृत संकाय के लिए भी यथावत् लागू होंगे ।
- (छ) बोर्ड ऑफ स्टेडीज की संस्तुति संख्या 2 दिनांक 8 अप्रैल, 1971 पर विचार कर निश्चय किया कि बोर्ड द्वारा वांछित

सूचना केवल निम्नलिखित विश्वविद्यालयों से उपलब्ध कर बोर्ड की आगामी बैठक में विचारार्थ रखी जाय। अन्य विश्वविद्यालयों की परीक्षाओं की मान्यता के प्रश्न पर विश्वविद्यालयों की ओर से प्रस्ताव आने पर इक्वीवैलेन्स कमेटी द्वारा विचार कर लिया जाय—

- (1) काशी विद्यापीठ, वाराणसी,
- (2) बनारस हिन्दु विश्वविद्यालय, वाराणसी,
- (3) पंजाब विश्वविद्यालय, चण्डीगढ़,
- (4) लखनऊ विश्वविद्यालय, लखनऊ,
- (5) वाराणसेय संस्कृत विश्वविद्यालय, वाराणसी।

(ज) बोर्ड ऑफ स्टडीज की संस्तुतियाँ संख्या 3, 4, 5, 6 व 7 दिनांक 8 अप्रैल, 1971 की स्वीकार कर ली जाय।

(झ) शास्त्री द्वितीय खण्ड तथा आचार्य द्वितीय खण्ड की 1972 की परीक्षाओं के पाठ्यक्रम वहीं होंगे जो रजिस्ट्रार, शिक्षा विभागीय संस्कृत परीक्षाएँ, राजस्थान ने 1971 की परीक्षाओं के लिए निर्धारित किये थे।

(ञ) शिक्षा शास्त्री की 1971 की परीक्षा का पाठ्यक्रम वही होगा जो विश्वविद्यालय ने 1971 की परीक्षा के लिए रखा था।

यह भी संस्तुति करने का निश्चय किया कि उपरोक्त संस्तुतियों को ध्यान में रखते हुए शास्त्री तथा आचार्य परीक्षाओं सम्बन्धी विश्वविद्यालय हैण्ड बुक पार्ट II के परिनियम अव्यादेशों एवं रेगुलेशन्स में आवश्यक परिवर्तन एवं परिवर्धन किये जाय जो परिशिष्ट (जी) में दिये हुए हैं।

ह० डॉ० पुरुषोत्तम लाल भार्गव  
डीन

## APPENDIX 'A'

विश्वविद्यालय कार्यालय में 5 फरवरी, 1971 को मध्याह्न  
12-00 बजे सम्पन्न बोर्ड ऑफ स्टेडीज इन  
संस्कृत स्टेडीज की बैठक का कार्य विवरण  
उपस्थिति

1. डॉ० पी. एल. भार्गव—अध्यक्ष संस्कृत संकाय
2. श्री लक्ष्मीलाल जोगी
3. श्री सुरजनदास स्वामी
4. श्री गोविन्दनारायण शर्मा
5. श्री खड्गनाथ मिश्र
6. श्री मोतीलाल जोगी
7. श्री दुर्गादत्त शर्मा
8. श्री गंगाधर द्विवेदी
9. श्री विम्बनाथ मिश्र
10. श्री श्यामनन्दन मिश्र

श्री रामनारायण त्रिगुर्वेदी प्रिन्सिपल, जोधपुर, निदेशक, संस्कृत शिक्षा,  
राजस्थान के पद पर पदासीन होने के कारण बोर्ड की बैठक में भाग नहीं  
ले सके ।

- (1) विश्वविद्यालय के स्टेट्यूट 126 (बी) के अन्तर्गत संस्कृत अध्ययन  
बोर्ड ऑफ स्टेडीज ने तीन वर्ष के लिए श्री गोविन्दनारायण  
शर्मा, प्रधानाचार्य महाराज संस्कृत कालेज, जयपुर को संस्कृत  
अध्ययन बोर्ड ऑफ स्टेडीज का संयोजक (इन्वीनर) नियुक्त  
किया ।
- (2) संस्कृत अध्ययन संकाय के निश्चय संख्या 5 पर विचार कर  
संस्तुति करने का निश्चय किया कि बोर्ड 1971 के प्रारम्भ  
से शास्त्री परीक्षा का त्रिवर्षीय पाठ्यक्रम लागू करने सम्बन्धी  
संकाय के निर्णय से पूर्णतया सहमत है । अतः श्री मोतीलाल  
जोगी प्रिन्सिपल, राजकीय संस्कृत कालेज, मनोहरपुर के पत्रांक  
168 दिनांक 21-1-71 द्वारा प्रस्तुत त्रिवर्षीय शास्त्री परीक्षा  
योजना परिलिखित रूप में परिलिखित 1 के अनुसार स्वीकार  
की जाय ।

(3) बोर्ड ने श्री मोतीलाल जोशी, प्रिंसिपल, संस्कृत कालेज मनोहरपुर द्वारा प्रस्तावित आचार्य परीक्षा योजना जो जुलाई 1971 से प्रभावशील करायी जानी है पर विचार किया और संस्तुति करने का निश्चय किया कि प्रस्तावित आचार्य परीक्षा योजना परिशोधित रूप में परिशिष्ट 2 के अनुसार स्वीकार की जाय ।

(4) बोर्ड ने स्वीकृति त्रिवर्षीय योजना और आचार्य परीक्षा योजना के अनुसार पाठ्यक्रम बनाने के प्रश्न पर विचार किया, तथा संस्तुति करने का निश्चय किया कि निम्नलिखित महानुभावों की एक उपसमिति उपरोक्त परीक्षा योजना के अनुसार पाठ्यक्रम बनाकर बोर्ड की आगामी बैठक में प्रस्तुत करें ।

1. डॉ० पी. एल. भार्गव, अध्यक्ष
2. श्री दुर्गादत्त शर्मा
3. श्री गंगाधर द्विवेदी
4. श्री मोतीलाल जोशी

डाक्टर पी. एल. भार्गव द्वारा ओ० 329 एम-14 को संशोधित करने सम्बन्धी निम्नलिखित प्रस्ताव पर विचार किया ।

0-329 M. 14 should be read as follows :

“The examination for the Degree of Acharya will consist of specialised courses in the following subjects, Literary and Cultural History of Ancient India and Comperative Philology will from a Compulsory part of the courses in each subjects”.

निश्चय किया कि आचार्य परीक्षा हेतु इस संशोधन को स्वीकार किया जाय ।

बोर्ड की अगली बैठक मार्च के द्वितीय सप्ताह में आयोजित की जाय ।

ह०

(गोविन्दनारायण शर्मा)

कन्वीनर

संस्कृत अध्ययन बोर्ड ऑफ स्टडीज

## परिशिष्ट 1

(Ref. Res. No. 2 dated 5th Feb. 71 of the  
B.O.S. in Sanskrit)

शास्त्री परीक्षा (1 जुलाई, 1971 से प्रारम्भ)

शास्त्री परीक्षा का अव्ययन पाठ्यक्रम त्रिवर्षीय होगा जिसमें प्रत्येक वर्ष के अन्त में एक परीक्षा होगी अर्थात् प्रथम वर्ष के अन्त में 'शास्त्री प्रथम वर्ष' परीक्षा, द्वितीय वर्ष के अन्त में 'शास्त्री द्वितीय वर्ष' परीक्षा तथा तृतीय वर्ष के अन्त में 'शास्त्री अन्तिम वर्ष' परीक्षा होगी ।

त्रिवर्षीय शास्त्री परीक्षा के लिये निम्न प्रकार विषय निर्धारित होंगे—

- वर्ग 1 अनिवार्य विषय
- वर्ग 2 वैकल्पिक मुख्य विषय
- वर्ग 3 वैकल्पिक विषय

शास्त्री प्रथम वर्ष परीक्षा में ग्राह्य

वर्ग 1 अनिवार्य विषय

1. सामान्य संस्कृत
2. सामान्य हिन्दी
3. सामान्य अंग्रेजी

वर्ग 2 वैकल्पिक मुख्य विषय

निम्नांकित में से कोई एक विषय ग्राह्य है

1. वेद (ऋग्वेद यजुर्वेद सामवेद अथर्ववेद में से एक)  
प्रायोगिक सहित
2. व्याकरण
3. साहित्य
4. सामान्य दर्शन
5. वेदान्त
6. मीमांसा
7. न्याय
8. ज्योतिष (प्रायोगिक सहित)
9. वर्मशास्त्र
10. जैन दर्शन
11. बौद्ध दर्शन
12. पौरोहित्य (प्रायोगिक सहित)
13. पुराणोत्तिहास

### वर्ग 3 वैकल्पिक विषय

निम्नांकित में से कोई दो विषय ग्राह्य हैं, किन्तु क्रम संख्या 12 व 13 में छात्र कोई एक विषय ही ले सकेगा ।

1. हिन्दी साहित्य
2. अंग्रेजी साहित्य
3. एक विदेशी भाषा (जर्मन या फ्रेंच या रूसी या फारसी)
4. इतिहास
5. राजनीति
6. अर्थशास्त्र
7. सांख्यिकी
8. लोक प्रशासन
9. मनोविज्ञान
10. समाज शास्त्र
11. गृह विज्ञान
12. फलित ज्योतिष
13. सामान्य पौरोहित्य

### ध्यातव्य 1

एक छात्र को जो अनिवार्य वर्ग (1) के सामान्य अंग्रेजी विषय में अनुत्तीर्ण रहता है, शास्त्री द्वितीय वर्ष परीक्षा में अध्ययन चालू रखने की अनुमति दी जावेगी । यदि वह प्रथम वर्ष परीक्षा के वैकल्पिक वर्गों (2) व (3) के समस्त विषयों में उत्तीर्ण हो जाता है ऐसे छात्र को प्रथम वर्ष परीक्षा के अनिवार्य वर्ग (1) के सामान्य अंग्रेजी में आगामी तीन (मुख्य एवं पूरक) परीक्षाओं में उत्तीर्ण होने पर ही शास्त्री अन्तिम वर्ष परीक्षा में प्रवेश दिया जावेगा । यदि एक छात्र द्वितीय वर्ष परीक्षा के लिए निर्धारित समस्त विषयों में उत्तीर्ण हो जाता है और पुनः प्रथम वर्ष परीक्षा के अनिवार्य वर्ग (1) के वर्णित विषय में अनुत्तीर्ण हो जाता है तो उसका द्वितीय वर्ष परीक्षा का परिणाम रोक लिया जावेगा तथा प्रथम वर्ष परीक्षा के अनिवार्य वर्ग (1) के वर्णित विषय को उत्तीर्ण करने पर ही घोषित किया जावेगा । ऐसे छात्र को आगामी 2 (मुख्य तथा पूरक) परीक्षाओं में अनुत्तीर्ण विषय को उत्तीर्ण करने के दो अवसर दिये जायेंगे तथा अन्तिम वर्ष परीक्षा में प्रवेश दिया जावेगा । यदि छात्र इन दो अवसरों में भी अनुत्तीर्ण विषय को उत्तीर्ण करने

में असफल रहा (परीक्षा में प्रविष्ट होने की असमर्थता असफलता मानी जावेगी) तो उसका प्रथम वर्ष तथा द्वितीय वर्ष परीक्षा का परिणाम निरस्त कर दिया जायेगा ।

इसी प्रकार अहिन्दी भाषी परीक्षार्थी यदि द्वितीय वर्ष के अनिवार्य सामान्य हिन्दी के पत्र में अनुत्तीर्ण रहता है तो उसे शास्त्री अन्तिम वर्ष परीक्षा में अध्ययन चालू रखने की अनुमति दी जावेगी । यदि वह शास्त्री द्वितीय वर्ष के वैकल्पिक वर्गों (2) व (3) के समस्त विषयों में उत्तीर्ण हो जाता है ऐसे छात्र को आगामी दो (मुख्य तथा पूरक) परीक्षाओं में अनुत्तीर्ण सामान्य हिन्दी को उत्तीर्ण करने के दो अवसर दिये जावेंगे । यदि छात्र इन दो अवसरों में भी अनुत्तीर्ण विषय को उत्तीर्ण करने में असफल रहा (परीक्षा में प्रविष्ट होने की असमर्थता असफलता मानी जावेगी) तो उसका द्वितीय वर्ष का परिणाम निरस्त कर दिया जावेगा ।

## ध्यातव्य 2

एक छात्र को अनिवार्य वर्ग (1) के विषयों में एक बार उत्तीर्ण होने पर पुनः प्रविष्टि होना आवश्यक नहीं होगा भले ही वह परीक्षा में अनुत्तीर्ण रहता है ऐसा छात्र स्वेच्छा से अनिवार्य वर्ग (1) के समस्त विषयों में पुनः भी बैठ सकता है । पुनः बैठने की स्थिति में उसका अनिवार्य वर्ग (1) का पूर्व परिणाम निरस्त कर दिया जावेगा ।

एक अभ्यर्थी जो माध्यमिक शिक्षा बोर्ड, राजस्थान, अजमेर की उपाध्याय प्रथम खण्ड परीक्षा अथवा इसके समकक्ष विश्वविद्यालय द्वारा मान्यता प्राप्त कोई अन्य परीक्षा उत्तीर्ण हैं, विश्वविद्यालय से सम्बद्ध किसी महाविद्यालय एक शिक्षा सत्र पर्यन्त नियमित उपस्थित रह कर अध्ययन करने पर शास्त्री प्रथम वर्ष परीक्षा में प्रवेश के योग्य होगा ।

एक अभ्यर्थी जो विश्वविद्यालय की शास्त्री प्रथम वर्ष परीक्षा या माध्यमिक शिक्षा बोर्ड, राजस्थान, अजमेर की उपाध्याय द्वितीय खण्ड या सम्पूर्ण परीक्षा या राजस्थान शिक्षा विभागीय उपाध्याय माध्यम परीक्षा उत्तीर्ण करने के पश्चात् विश्वविद्यालय से सम्बद्ध किसी महाविद्यालय में एक शिक्षा सत्र पर्यन्त नियमित उपस्थित रह कर अध्ययन करता है वह शास्त्री द्वितीय वर्ष परीक्षा में प्रवेश के योग्य होगा ।

एक अभ्यर्थी जो विश्वविद्यालय की शास्त्री द्वितीय वर्ष परीक्षा उत्तीर्ण करने के पश्चात् विश्वविद्यालय से सम्बद्ध किसी महाविद्यालय में एक शिक्षा

सत्र पर्यन्त नियमित उपस्थित रह कर अध्ययन करता है वह शास्त्री अन्तिम वर्ष परीक्षा में प्रवेश योग्य होगा ।

कोई अभ्यर्थी जिसने विश्वविद्यालय की शास्त्री परीक्षा अथवा राज-स्थान शिक्षा विभागीय शास्त्री परीक्षा पहिले उत्तीर्ण कर ली है । किसी आगामी वर्ष में शास्त्री पाठ्यक्रम में निर्धारित वैकल्पिक वर्ग (2) व (3) के यथेच्छ क्रमशः किसी एक और अथवा दो विषय लेकर जिसे पहिले लेकर उत्तीर्ण नहीं किया है परीक्षा में प्रविष्ट हो सकेगा । उत्तीर्ण होने पर ऐसे छात्र को इसका एक प्रमाण-पत्र दिया जावेगा । ऐसे छात्र को त्रिवर्षीय शास्त्री पाठ्यक्रम में निर्धारित उस विषय के समस्त प्रश्न पत्रों को एक ही ओर उसी वर्ष में एक साथ लेना होगा । यदि वह उस वर्ष में विश्वविद्यालय में किसी अन्य परीक्षा के लिये पंजीयित नहीं किया गया है ।

एक अभ्यर्थी जो उक्त अध्यादेश के अन्तर्गत परीक्षा में प्रविष्ट होना चाहता है । उसे निर्धारित आवेदन-पत्र कुलसचिव को परीक्षा की पूर्वगामी 15 सितम्बर से पूर्व प्रस्तुत करना चाहिये । पूरक परीक्षाओं में बैठने वाले अभ्यर्थी एक अक्टूबर पूर्व आवेदन कर सकते हैं । निर्धारित विलम्ब शुल्क 10 रु० सहित 15 अक्टूबर तक आवेदन किया जा सकता है । महाविद्यालयी छात्र होने की स्थिति में 1 नवम्बर तिथि तक आवेदन किया जा सकता है । परीक्षा आवेदन पत्र निर्धारित शुल्क 20 रु० एवं अंकतालिका शुल्क 2 रु० सहित उसी अग्रेपण अधिकारी (सम्बद्ध अधिकारी महाविद्यालयों के प्राचार्य अथवा सक्षम अधिकारी) द्वारा अग्रेपित होना चाहिये । जिसमें अभ्यर्थी का परीक्षा आवेदन-पत्र अग्रेपित किया था ।

किसी अभ्यर्थी का आवेदन-पत्र अस्वीकृत होने की स्थिति में अथवा परीक्षा आवेदन-पत्र न प्रेषित कर केवल शुल्क प्रेषित करने की स्थिति में अभ्यर्थी द्वारा जमा कराये गये शुल्क में से 2 रु० काट कर शेष राशि अभ्यर्थी को लौटा दी जावेगी ।

आर० 43 सी

### त्रिवर्षीय शास्त्री पाठ्यक्रम परीक्षा

शास्त्री प्रथम वर्ष व द्वितीय वर्ष परीक्षा उत्तीर्ण करने पर छात्र को कोई श्रेणी प्रदान नहीं की जावेगी । छात्र को इन परीक्षाओं के परिणाम पर केवल उत्तीर्ण घोषित किया जावेगा । शास्त्री अन्तिम वर्ष परीक्षा उत्तीर्ण करने पर त्रिवर्षीय (प्रथम, द्वितीय एवं अन्तिम वर्ष परीक्षाओं में निर्धारित



विषयों के सम्मिलित पूर्णाङ्क के न्यूनतम 60 प्रतिशत अथवा इससे अधिक अङ्क प्राप्त करने पर प्रथम श्रेणी न्यूनतम 48 प्रतिशत अथवा इससे अधिक अङ्क प्राप्त करने पर द्वितीय श्रेणी तथा न्यूनतम 36 प्रतिशत अथवा इससे अधिक अङ्क प्राप्त करने पर तृतीय श्रेणी प्रदान की जावेगी । किसी भी वर्ग में 75 प्रतिशत अथवा इससे अधिक अङ्क प्राप्त करने पर उस वर्ग में विशेष योग्यता प्रदान की जावेगी ।

### त्रिवर्षीय शास्त्री पाठ्यक्रम की प्रथम वर्ष परीक्षा की योजना

वर्ग तथा विषय पत्र	समय प्रतिपत्र	पूर्णांक विषय प्रतिवर्ग	न्यूनतम पूर्णांक प्रतिवर्ग/विषय
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#### वर्ग (1) अनिवार्य विषय

1. सामान्य संस्कृत 1	3 घण्टा	100	36
2. सामान्य अंग्रेजी 1	3 घण्टा	100	36

#### वर्ग वैकल्पिक विषय

निम्नांकित में से कोई एक विषय ग्राह्य है

1. वेद			
ऋग्वेद या 2	3 घण्टा	200	72
सामवेद या			
यजुर्वेद या			
अथर्ववेद			
2. व्याकरण 2	"	"	"
3. साहित्य 2	"	"	"
4. सामान्य दर्शन 2		"	"
5. वेदान्त 2	"	"	"
6. मीमांसा 2	"	"	"
7. न्याय 2	"	"	"
8. ज्योतिष 2	"	"	"
9. धर्मशास्त्र 2	"	"	"
10. जैन दर्शन 2	"	"	"

11. बौद्ध दर्शन 2	3 घण्टा	200	72
12. पौरोहित्य 2	3 घण्टा	200	72
13. पुराणेतिहास 2	3 घण्टा	200	72

### वर्ग (3) वैकल्पिक विषय

निम्नांकित में से कोई दो विषय ग्राह्य हैं, किन्तु क्रम संख्या 12 व 13 में से छात्र कोई एक विषय ही ले सकेगा ।

1. हिन्दी साहित्य 1	3 घण्टा	100	36
2. अंग्रेजी साहित्य 1	3 घण्टा	100	36
3. एक विदेशी भाषा 1 जर्मन या फ्रेंच या रूसी या फारसी	3 घण्टा	100	36
4. इतिहास	3 घण्टा	100	36
5. राजनीति 1	3 घण्टा	100	36
6. अर्थशास्त्र 1	3 घण्टा	100	36
7. सांख्यिकी 1	3 घण्टा	100	36
8. लोक प्रशासन 1	3 घण्टा	100	36
9. मनोविज्ञान 1	3 घण्टा	100	36
10. समाजशास्त्र 1	3 घण्टा	100	36
11. गृहविज्ञान 1	3 घण्टा	100	36
12. फलित ज्योतिष 1	3 घण्टा	100	36
13. सामान्य पौरोहित्य 1	3 घण्टा	100	36

### टिप्पणी

जिन विषयों के पाठ्यक्रम में प्रायोगिक परीक्षा निर्धारित होंगी वह उस विषय के प्रश्न-पत्र का भाग होंगी । ऐसे स्थलों पर सैद्धान्तिक परीक्षा तथा प्रायोगिक परीक्षा में पृथक-पृथक न्यूनतम उत्तरांक प्राप्त करना आवश्यक होगा । प्रायोगिक परीक्षा विश्वविद्यालय से नियुक्त परीक्षक द्वारा निर्दिष्ट परीक्षा केन्द्र पर निर्दिष्ट समय पर ली जावेगी । इस परीक्षा का समय सैद्धान्तिक के अतिरिक्त रहेगा । इसके अङ्क सम्बन्धित पत्र के अङ्कों के साथ सम्मिलित कर दिये जायेंगे ।

**त्रिवर्षीय शास्त्री पाठ्यक्रम की द्वितीय वर्ष की परीक्षा योजना**

वर्ग तथा विषय पत्र	समय प्रतिपत्र	पूर्णांक/ प्रतिवर्ग/विषय	न्यूनतम उत्तीर्णांक प्रतिवर्ग/विषय
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**वर्ग (1) अनिवार्य विषय**

1. सामान्य संस्कृत	1	3 घण्टा	100	36
2. सामान्य हिन्दी	1	3 घण्टा	100	36

**वर्ग (2) वैकल्पिक मुख्य विषय**

निम्नांकित में से कोई एक विषय ग्राह्य है

1. वेद				
ऋग्वेद या	2	3 घण्टा	200	72
सामवेद या				
यजुर्वेद या				
अथर्ववेद में से एक				
2. व्याकरण	2	3 घण्टा	200	72
3. साहित्य	2	3 घण्टा	200	72
4. सामान्य दर्शन	2	3 घण्टा	200	72
5. वेदान्त	2	3 घण्टा	200	72
6. मीमांसा	2	3 घण्टा	200	72
7. न्याय	2	3 घण्टा	200	72
8. ज्योतिष	2	3 घण्टा	200	72
9. धर्म शास्त्र	2	3 घण्टा	200	72
10. जैन दर्शन	2	3 घण्टा	200	72
11. बौद्ध दर्शन	2	3 घण्टा	200	72
12. पौराणिक साहित्य	2	3 घण्टा	200	72
13. पुराणेतिहास	2	3 घण्टा	200	72

**वर्ग (3) वैकल्पिक द्विषय**

(निम्नांकित में से कोई दो विषय ग्राह्य है, किन्तु क्रम संख्या 12 व 13 में छात्र कोई एक विषय ही ले सकेगा।)

1. हिन्दी साहित्य	1	3 घण्टा	100	36
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2. अंग्रेजी साहित्य	1	3 घण्टा	100	36
3. एक विदेशी भाषा जर्मन/फ्रेंच/रूसीयन/ फारसी	1	3 घण्टा	100	36
4. इतिहास	1	3 घण्टा	100	36
5. राजनीति विज्ञान	1	3 घण्टा	100	36
6. अर्थ शास्त्र	1	3 घण्टा	100	36
7. सांख्यिकी	1	3 घण्टा	100	36
8. लोक प्रशासन	1	3 घण्टा	100	36
9. मनोविज्ञान	1	3 घण्टा	100	36
10. समाजशास्त्र	1	3 घण्टा	100	36
11. गृह विज्ञान	1	3 घण्टा	100	36
12. फलित ज्योतिष	1	3 घण्टा	100	36
13. सामान्य पौरोहित्य	1	3 घण्टा	100	36

### टिप्पणी

जिन विषयों के पाठ्यक्रम में प्रायोगिक परीक्षा निर्धारित होगी वह उस विषय के प्रश्न पत्र का भाग होगी। ऐसे स्थलों पर सैद्धांतिक परीक्षा तथा प्रायोगिक परीक्षा में पृथक-पृथक न्यूनतम उत्तीर्णांक प्राप्त करना आवश्यक होगा। प्रायोगिक परीक्षा विश्वविद्यालय से नियुक्त परीक्षक द्वारा निर्दिष्ट परीक्षा केन्द्र पर निर्दिष्ट समय पर ली जावेगी। इस परीक्षा का समय सैद्धांतिक के अतिरिक्त रहेगा।

इसके अङ्क सन्तुलित पत्र के अङ्कों के साथ सम्मिलित कर दिये जावेंगे।

### त्रिवर्षीय शास्त्री पाठ्यक्रम की अन्तिम वर्ष की परीक्षा योजना

वर्ग तथा विषय पत्र	समय प्रतिपत्र	पूर्णांक प्रतिवर्ग विषय	न्यूनतम उत्तीर्णांक प्रतिवर्ग/ विषय
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#### वर्ग (1) अतिवार्य विषय

1. सामान्य संस्कृत	2	3 घण्टा	200	72
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## वर्ग (2) वैकल्पिक मुख्य विषय

(निम्नांकित में से कोई एक विषय ग्राह्य है)

## 1. वेद

ऋग्वेद या	2	3 घन्टा	200	72
सामवेद या				
अथर्ववेद या				
अजुर्वेद में से एक				

2. व्याकरण	2	3 घन्टा	200	72
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3. साहित्य	2	3 घन्टा	200	72
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4. सामान्य दर्शन	2	3 घन्टा	200	72
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5. वेदान्त	2	3 घन्टा	200	72
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6. मीमांसा	2	3 घन्टा	200	72
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7. न्याय	2	3 घन्टा	200	72
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8. ज्योतिष	2	3 घन्टा	200	72
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9. धर्म शास्त्र	2	3 घन्टा	200	72
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10. जैन दर्शन	2	3 घन्टा	200	72
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11. बौद्ध दर्शन	2	3 घन्टा	200	72
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12. पौरोहित्य	2	3 घन्टा	200	72
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13. पुराणेतिहास	2	3 घन्टा	200	72
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## वर्ग (3) वैकल्पिक विषय

(निम्नांकित में से कोई दो विषय ग्राह्य हैं, किन्तु क्रम संख्या 12 व

13 में छात्र कोई एक विषय ही ले सकेगा)

1. हिन्दी साहित्य	1	3 घन्टा	100	36
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2. अंग्रेजी साहित्य	1	3 घन्टा	100	36
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3. एक विदेशी भाषा	1	3 घन्टा	100	36
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जर्मन/फ्रेंच/रूसी/

फारसी

4. इतिहास	1	3 घन्टा	100	36
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5. राजनीति विज्ञान	1	3 घन्टा	100	36
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6. अर्थ शास्त्र	1	3 घन्टा	100	36
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7. सांख्यिकी	1	3 घन्टा	100	36
8. लोक प्रशासन	1	"	"	"
9. मनोविज्ञान	1	"	"	"
10. समाज शास्त्र	1	"	"	"
11. गृह विज्ञान	1	"	"	"
12. फलित ज्योतिषी	1	"	"	"
13. सामान्य पौरोहित्य	1	"	"	"

टिप्पणी—

जिन विषयों के पाठ्यक्रम में प्रायोगिक परीक्षा निर्धारित होगी वह उस विषय के प्रश्न पत्र का भाग होगी । ऐसे स्थलों पर सैद्धान्तिक परीक्षा तथा प्रायोगिक परीक्षा में पृथक-पृथक न्यूनतम उत्तीर्णक प्राप्त करना आवश्यक होगा । प्रायोगिक परीक्षा विश्वविद्यालय से नियुक्त परीक्षक द्वारा निर्दिष्ट परीक्षा केन्द्र पर निर्दिष्ट समय पर ली जावेगी । इस परीक्षा का समय सैद्धान्तिक के अतिरिक्त रहेगा । इसके अङ्क सम्बन्धित पत्र के अङ्कों के साथ सम्मिलित कर दिये जावेंगे ।

## परिशिष्ट 2

*Ref. Res. No 3 dated 5th February, 1971 of the  
Board of Studies in Sanskrit Studies*

आचार्य (पूर्वाह्न तथा उत्तराह्न) परीक्षा की योजना

विषय तथा प्रश्न पत्र	पूर्णांक प्रतिपत्र	न्यूनतम प्रतिपत्र	समय प्रति पत्र	पूर्वाह्न / उत्तराह्न परीक्षा के पूर्णांकों का योग	पूर्वाह्न उत्तराह्न परीक्षा के पूर्णांकों का योग
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## अनिवार्य विषय

प्रथम पत्र	100	25	3 घण्टा
द्वितीय वर्ष	„	„	„
तृतीय वर्ष	„	„	„

## वैकल्पिक विशिष्ट विषय

निम्न विषयों में से कोई एक विषय ग्राह्य है ।  
जिसमें पाँच (चतुर्थ, पंचम, षष्ठ, सप्तम तथा  
अष्टम) प्रश्न पत्र होंगे । अष्टम पत्र उत्तराह्न  
परीक्षा में ही ग्राह्य होगा । वेद (प्रायोगिक  
सहित) व्याकरण/साहित्य/सामान्य दर्शन/  
वेदान्त/मीमांसा/न्याय/ज्योतिष (प्रायोगिक  
सहित) जैन दर्शन/बौद्ध दर्शन / पौरोहित्य  
(प्रायोगिक सहित) धर्मशास्त्र/पुराणोत्तिहास/  
वास्तु तथा शिल्प/आगम तथा तन्त्र/पाली

तथा प्राकृत ।

400

144

चतुर्थ पत्र	100	25	3 घण्टा
पंचम पत्र	„	„	„
षष्ठ पत्र	„	„	„
सप्तम पत्र	„	„	„
अष्टम पत्र	„	„	„

विशेष—

अष्टम पत्र उत्तरार्द्ध परीक्षा में ही ग्राह्य होगा। और शेष सात पत्रों में यद्येच्छ कोई चार पूर्वार्द्ध परीक्षा में तथा शेष तीन उत्तरार्द्ध परीक्षा में ग्राह्य होंगे।

टिप्पणी—

वैकल्पिक विशिष्ट विषय के अन्तर्गत वेद/ज्योतिष तथा पौराहित्य विषय के अष्टम प्रश्न-पत्र के पाठ्यक्रम में तद् तद् विषय की प्रायोगिक परीक्षा भी होगी वह उस पत्र का भाग होगी ऐसे स्थलों पर सैद्धान्तिक परीक्षा तथा प्रायोगिक परीक्षा में पृथक-पृथक न्यूनतम उत्तीर्णक प्राप्त करना आवश्यक होगा। प्रायोगिक परीक्षा विश्वविद्यालय से नियुक्त परीक्षक द्वारा निर्दिष्ट परीक्षा केन्द्र पर निर्दिष्ट समय पर ली जावेगी। इस परीक्षा का समय सैद्धान्तिक के अतिरिक्त होगा। इसके अङ्क सम्बन्धित पत्र के अङ्कों के साथ सम्मिलित कर लिये जायेंगे।

आचार्य परीक्षा (पूर्वार्द्ध तथा उत्तरार्द्ध)

आचार्य परीक्षा में 8 प्रश्न-पत्र होंगे। प्रत्येक प्रश्न-पत्र का समय तीन घण्टे का होगा। आठ प्रश्न-पत्रों में से तीन (प्रथम, द्वितीय तथा तृतीय) पत्र अनिवार्य होंगे। इसके अतिरिक्त शेष पांच (चतुर्थ, पंचम, षष्ठ, सप्तम तथा अष्टम) पत्र वैकल्पिक विशिष्ट विषय के होंगे, जिनमें से अष्टम प्रश्न-पत्र जो विशिष्ट अर्थात् स्व शास्त्र के आलोचनात्मक अव्ययन व्यक्तित्व इतिहास निबन्ध अथवा प्रायोगिक का होगा) उत्तरार्द्ध परीक्षा में ही ग्राह्य होगा और शेष सात प्रश्न-पत्रों में यद्येच्छ कोई चार पूर्वार्द्ध परीक्षा में तथा शेष तीन उत्तरार्द्ध परीक्षा में ग्राह्य होंगे। प्रत्येक प्रश्न पत्र के पूर्णाङ्क 100 होंगे।

अनिवार्य—

प्रथम पत्र

पूर्णांक 100

वैदिक साहित्य तथा तुलनात्मक साया विज्ञान

इस पत्र में अङ्क विभाजन निम्न प्रकार रहेगा:—

वेद	35 अङ्क
निबन्ध	15 अङ्क
साया विज्ञान	35 अङ्क
संस्कृत भाषा का इतिहास	15 अङ्क



## अथवा

संस्कृत साहित्य तथा तुलनात्मक भाषा विज्ञान

इस पत्र में अङ्क विभाजन निम्न प्रकार रहेगा:—

संस्कृत साहित्य गद्य पद्य	30 अङ्क
नाटक	20 अङ्क
संस्कृत भाषा का इतिहास	15 अङ्क
भाषा विज्ञान	35 अङ्क

## टिप्पणी—

वैकल्पिक विशिष्ट विषय के अन्तर्गत वेद (ऋग्वेद) यजुर्वेद । सामवेद (अथर्ववेद) विषय को लेने वाले उक्त प्रथम पत्र में संस्कृत साहित्य तथा भाषा विज्ञान विषयक पत्र ही लेंगे । वेद के अतिरिक्त अन्य विषय अर्थात् व्याकरण, साहित्य, सामान्य दर्शन, वेदान्त, मीमांसा, न्याय, ज्योतिष, जैन दर्शन, बौद्ध दर्शन, पौरोहित्य, धर्म शास्त्र, पुराणोतिहास, वास्तु तथा शिल्प, आगम तथा तन्त्र । पाली तथा भाषा विज्ञान विषयक पत्र ही लेंगे ।

## द्वितीय पत्र

पूर्णांक 100

प्राचीन भारत का साहित्यिक तथा सांस्कृतिक इतिहास

इस पत्र में अङ्क विभाजन निम्न प्रकार रहेगा—

वैदिक साहित्य का इतिहास	25 अङ्क
लौकिक संस्कृत साहित्य का इतिहास	35 अङ्क
सांस्कृतिक इतिहास	40 अङ्क

## तृतीय पत्र

पूर्णांक 100

भारतीय धर्म एवं दर्शन

इस पत्र में अङ्क विभाजन निम्न प्रकार होगा—

धर्म	25 अङ्क
दर्शन, सांख्य न्याय वेदान्त	
चार्वाक बौद्ध तथा जैन	75 अङ्क

## अथवा

संस्कृत साहित्य

इस पत्र में अङ्क विभाजन निम्न प्रकार रहेगा—

संस्कृत साहित्य गद्य	50 अङ्क
नाटक	25 अङ्क
पाली तथा प्राकृत	25 अङ्क

## टिप्पणी—

वैकल्पिक विशिष्ट के विषय के अन्तर्गत सामान्य दर्शन, वेदान्त मीमांसा, जैन दर्शन/बौद्ध दर्शन/धर्म शास्त्र विषय लेने वाले उक्त तृतीय पत्र में “संस्कृत साहित्य” विषयक पत्र ही लेंगे। वेद, व्याकरण, साहित्य, ज्योति, पौरोहित्य, पुराणोतिहास, वास्तु तथा शिल्प, आगम तथा तन्त्र, पाली तथा प्राकृत विषय लेने वाले उक्त तृतीय पत्र में “भारतीय धर्म दर्शन” विषयक पत्र ही लेंगे।

## वैकल्पिक विशिष्ट विषय —

निम्नांकित विषयों में से कोई एक विषय ग्राह्य होगा, जिसमें पांच (चतुर्य, पंचम, षष्ठ, सप्तम, अष्टम) प्रश्न-पत्र होंगे। प्रत्येक प्रश्न-पत्र के पूर्णाङ्क 100 होंगे। अष्टम पत्र आचार्य (उत्तरार्द्ध) परीक्षा में ही ग्राह्य होगा।

या तो 1. एक वेद प्रायोगिक सहित (ऋग्वेद यजुर्वेद सामवेद अथर्ववेद)

या 2. व्याकरण

या 3. साहित्य

या 4. सामान्य दर्शन

या 5. वेदान्त

या 6. मीमांसा

या 7. न्याय

या 8. प्रायोगिक सहित

या 9. जैन दर्शन

- या 10. बौद्ध दर्शन  
 या 11. पौरोहित्य (प्रायोगिक सहित)  
 या 12. धर्म शास्त्र  
 या 13. पुराणोतिहास  
 या 14. वास्तु तथा शिल्प  
 या 15. आगम तथा तन्त्र  
 या 16. पाली तथा प्राकृत

### टिप्पणी

वैकल्पिक विषय के अन्तर्गत वेद, ज्योतिष तथा पौरोहित्य विषय के अष्टम प्रश्न-पत्र के पाठ्यक्रम में तद् तद् विषय की प्रायोगिक परीक्षा भी होगी। वह उस पत्र का भाग होगी। ऐसे स्थलों पर सैद्धान्तिक परीक्षा तथा प्रायोगिक परीक्षा में पृथक्-पृथक् न्यूनतम उत्तीर्णक प्राप्त करना आवश्यक होगा। प्रायोगिक परीक्षा विश्वविद्यालय से नियुक्त परीक्षा द्वारा निर्दिष्ट परीक्षा केन्द्र पर निर्दिष्ट समय पर ली जायेगी। इस परीक्षक का समय सैद्धान्तिक के अतिरिक्त रहेगा। इसके अंक सम्बन्धित पत्र के अङ्कों के साथ सम्मिलित कर दिये जायेंगे।

ओ. 329 एम. 23 के वर्तमान अध्यादेश के आगे निम्न प्रकार और जोड़कर पढ़ा जावे। “भारतवर्ष” में विवि द्वारा स्थापित किसी भी विश्वविद्यालय से एम० ए० (संस्कृत) परीक्षा साहित्य वर्ग सहित उत्तीर्ण छात्र वैकल्पिक विशिष्ट विषय के अन्तर्गत साहित्य विषय लेकर आचार्य परीक्षा में, दर्शन वर्ग सहित वर्ग सहित उत्तीर्ण छात्र वैकल्पिक विशिष्ट विषय के अन्तर्गत दर्शन विषय लेकर आचार्य परीक्षा में, वेद वर्ग सहित उत्तीर्ण छात्र वैकल्पिक विशिष्ट विषय के अन्तर्गत वेद विषय लेकर आचार्य परीक्षा में, धर्म शास्त्र वर्ग सहित उत्तीर्ण छात्र वैकल्पिक विशिष्ट विषय के अन्तर्गत धर्म शास्त्र विषय लेकर आचार्य परीक्षा में उत्तीर्ण हो सकेगा।

कोई अन्यार्थी जिसने विश्वविद्यालय की आचार्य परीक्षा अथवा राजस्थान शिक्षा विभागीय आचार्य परीक्षा पूर्व में उत्तीर्ण कर ली है वह आगामी वर्षों में आचार्य परीक्षा के पाठ्यक्रम में निर्धारित किसी अन्य वैकल्पिक विशिष्ट विषय को जिसे पहिले लेकर उत्तीर्ण नहीं किया है। निम्नलिखित विषय नियमानुसार लेकर परीक्षा में प्रविष्टि हो सकेगा :

(क) व्याकरण और न्याय के आचार्य परीक्षा में उत्तीर्ण छात्र वैकल्पिक विशिष्ट विषय के अन्तर्गत साहित्य, वर्णशास्त्र, दर्शन में से कोई एक विषय लेकर परीक्षा में प्रविष्ट होने का अधिकारी होगा

(ख) सामान्य दर्शन की आचार्य परीक्षा उत्तीर्ण छात्र न्याय के अतिरिक्त सभी दर्शन शास्त्रों व वर्णशास्त्र को वैकल्पिक विशिष्ट विषय के रूप में लेकर आचार्य परीक्षा में प्रविष्ट हो सकेगा ।

(ग) एक विषय में आचार्य परीक्षोत्तीर्ण छात्र वेद, व्याकरण, न्याय, ज्योतिष एवं मीमांसा के अतिरिक्त अन्य किसी भी विषय की आचार्य परीक्षा में प्रविष्ट हो सकेगा ।

## APPENDIX-B

विश्वविद्यालय कार्यालय में 25 मार्च 1971 को अपरान्ह  
1 बजे तथा 26 मार्च 71 को प्रातः 10-30 बजे सम्पन्न,  
बोर्ड आफ संस्कृत स्टेडीज की बैठक का कार्य विवरण

## उपस्थिति

1. श्री गोविन्द नारायण शर्मा—संयोजक
2. श्री डॉ० पी० एल० भार्गव
3. श्री लक्ष्मी लाल जोशी
4. श्री सुरजन दास स्वामी
5. श्री खड़ग नाथ मिश्र
6. श्री दुर्गा दत्त शर्मा
7. श्री गंगाधर त्रिवेदी
8. श्री श्यामनन्दन मिश्र
9. श्री विश्व नाथ मिश्र
10. „ मोती लाल जोशी (विशेष रूप से आमन्त्रित इन्होंने केवल 25-3-71 को भाग लिया)

1. (क) बोर्ड की गत मीटिंग की कार्यवाही की पुष्टि में R 44 C का निम्नलिखित अंश और जोड़ा गया ।

“विश्वविद्यालय त्रिवर्षीय शास्त्री प्रथम वर्ष उत्तीर्ण किये बिना, अर्थात् माध्यमिक शिक्षा बोर्ड राजस्थान की उपाध्याय द्वितीय खंड सम्पूर्ण परीक्षा या राजस्थान शिक्षा विभागीय उपाध्याय मध्यमा परीक्षा उत्तीर्ण करके सीधे त्रिवर्षीय शास्त्री पाठ्यक्रम के द्वितीय वर्ष परीक्षा में प्रविष्टि होने वाले अभ्यर्थियों को शास्त्री अन्तिम वर्ष परीक्षा उत्तीर्ण करने पर द्वितीय वर्ष व अन्तिम वर्ष परीक्षाओं में निर्धारित विषयों के सम्मिलित पूर्णाङ्क के न्यूनतम 60 प्रतिशत अथवा इससे अधिक अंक प्राप्त करने पर प्रथम श्रेणी, न्यूनतम 48 प्रतिशत अथवा इससे अधिक अंक प्राप्त करने पर द्वितीय श्रेणी तथा न्यूनतम 36 प्रतिशत अथवा इससे

अधिक अंक प्राप्त करने पर तृतीय श्रेणी प्रदान की जावेगी ।”

(ख) त्रिवर्षीय शास्त्री परीक्षा के वर्ग 3 के वैकल्पिक विषयों में भाषा विज्ञान व संस्कृत भाषा का इतिहास विषय जोड़ा जावे तथा प्रत्येक वर्ष की परीक्षा योजना में वैकल्पिक विषयों के अन्त में निम्नलिखित अंक जोड़ा जावे ।

(14) भाषा विज्ञान व संस्कृत 3 घण्टा 100 36  
भाषा का इतिहास

2. बोर्ड ने अपने निश्चय संख्या 4 दिनांक 5-2-71 द्वारा पाठ्यक्रम बनाने के लिए नियुक्त की गई उप समिति की संस्तुतियों पर विचार किया, और संस्तुति की नियुक्त उप समिति की संस्तुतियों को परिशिष्ट 1 में दिये गये संशोधनों सहित स्वीकार किया जाय ।
3. बोर्ड ने संस्तुति करने का निश्चय किया कि त्रिवर्षीय शास्त्री परीक्षा प्रथम वर्ष के अनिवार्य विषय सामान्य अंग्रेजी में 3 वर्ष अर्थात् 1972-73 व 74 के लिए उत्तीर्णता अनिवार्य न रखी जावे ।
4. बोर्ड ने यह भी संस्तुति करने का निश्चय किया कि आचार्य प्रथम वर्ष एवं द्वितीय वर्ष में यथेच्छा किसी भी पत्र को किसी भी वर्ष में ग्रहण करने के नियम को हटाकर आचार्य के दोनों वर्षों के लिए पृथक-पृथक रूप से ग्रह्य प्रश्न पत्रों को निश्चित किया जावे । इसके अनुसार परिशिष्ट 2 में निहित संशोधित आचार्य परीक्षा के पाठ्यक्रम में निश्चित किये गये प्रश्न पत्र ही दोनों वर्षों में लिए जावें ।
5. बोर्ड ने संस्तुति करने का निश्चय किया कि त्रिवर्षीय शास्त्री एवं आचार्य परीक्षा की योजना एवं पाठ्यक्रम स्वीकृत हो जाने के कारण इसके अनुसार इन परीक्षाओं में प्रवेश सम्बन्धी एवं अन्य नियम तैयार करने तथा नियम विनियम व अध्यादेशों में आवश्यक संशोधन करने हेतु निम्नलिखित महानुभावों की उप समिति का गठन किया जाय वह उप समिति नियम आदि बनाकर बोर्ड की आगामी बैठक में प्रस्तुत करेगी ।

1. डॉ० पी० एल० भार्गव—अध्यक्ष
2. श्री गोविन्द नारायण शर्मा
3. श्री मोतीलाल जोशी

बोर्ड की आगामी बैठक 8 अप्रैल 71 को आयोजित की जाय ।

ह० गोविन्द नारायण शर्मा  
संयोजक  
संस्कृत बोर्ड ऑफ स्टडीज

## परिशिष्ट-1

## शास्त्री प्रथम वर्ष परीक्षा

1. सामान्य संस्कृत प्रथम पत्र के 'क' भाग को निम्न प्रकार संशोधित किया जावे ।

“व्याकरण संवि षड् लिंग एवं गणों के आधार पर व्याकरण के प्रायोगिक प्रश्न एवं इन प्रकरणों के आधार पर अशुद्धि संशोधन”

इस पत्र का अङ्क विभाजन निम्न प्रकार किया जावे—  
व्याकरण 30, अनुवाद 20, काव्य 20, नाटक 30

2. ऋग्वेद प्रथम पत्र 'क' भाग में निम्नलिखित 10 सूक्त निश्चित किये जावें ।
3. सामान्य दर्शन प्रथम पत्र में 'मुक्तावली' का अनुमान 'खंडान्त' के स्थान पर 'प्रत्यक्ष खंडांत' शब्द प्रति स्थापित किया जावे ।
4. न्याय के प्रथम पत्र में 'न्याय सिद्धान्त मुक्तावली' के आगे 'प्रत्यक्ष खंड' शब्द और जोड़ा जावे ।
5. हिन्दी साहित्य के पत्र को निम्न प्रकार संशोधित किया जावे ।  
इस पत्र में अंक विभाजन निम्न प्रकार होगा—

(क) गद्य	25
(ख) कहानी	”
(ग) एकांकी	”
(घ) निबन्ध रचना	”

पाठ्य पुस्तकें—

- (1) गद्य लहरी—सं० डॉ० सुरेश चन्द्र गुप्त
- (2) गल्प दर्शिका—एल० एल० गर्ग व कमला भटनागर
- (3) अभिनव एकांकी—सेठ गोविन्द दास

सहायक पुस्तकें—

- (1) साहित्य दिग्दर्शन—श्रीमती स्वर्णलता अग्रवाल



(2) आधुनिक निबन्ध रचना—रमेश चन्द्र शास्त्री

(3) निबन्ध निकेत—मोतीलाल गुप्त

6. रशियन में निम्नलिखित पुस्तकें निर्धारित की जावें ।

1. N. Potepore

Learning Russian (Progress Publishers, Mas-  
cow) Parts one, two and three.

2. Practical Russian

My First Russian Part I and II

अभिस्तावित कोष—

Dictionary Russian English, English-Russian

„ Russian Hindi, Hindi-Russian

„ Russian Sanskrit, Sanskrit-Russian

7. इतिहास के पत्र में 'प्राचीन भारतीय इतिहास (प्रारम्भ से 700 ई०) तक अथवा 2 मध्य कालीन भारतीय इतिहास संस्थापक एवं संस्कृति (700 से 1740 ई० तक) संगोष्ठित किया जावे ।

8. फलित ज्योतिष में निम्न प्रकार संगोष्ठन हो —

1. (क) लाजिक नील कंठी (वर्ष तन्त्र) 40 अंक

(ख) लघु पाराशरी 20 अंक

(ग) प्रायोगिक (जन्म पत्र व वर्ष पत्र  
निर्माण फलादेश निरक्षण व मुहूर्त जान) 40 अंक

9 'भाषा विज्ञान व संस्कृत भाषा का इतिहास' में निम्नलिखित सहायक पुस्तकें रखी जावें ।

(1) भाषा विज्ञान—श्याम सुन्दर दास

(2) सामान्य भाषा विज्ञान—डॉ० बाबू राम सक्सेना

(3) तुलनात्मक भाषा शास्त्र—डॉ० मंगल देव शास्त्री

(4) संस्कृत भाषा विज्ञानम्

### शास्त्री-द्वितीय वर्ष

1. सामान्य संस्कृत प्रथम पत्र के 'क' भाग को निम्न प्रकार संशोधित किया जावे ।

व्याकरण प्रक्रिया, कारक एवं समासों के आवार पर  
व्याकरण के प्रायोगिक प्रश्न एवं अशुद्धि संशोधन ।

2. सामान्य संस्कृत की सहायक पुस्तकों में शिव राम आप्टे कृत 'संस्कृत निवन्ध पथ प्रदर्शिका' और जोड़ी जावे ।

3. व्याकरण के द्वितीय पत्र को निम्न प्रकार संशोधित किया जावे ।

(क) प्रौढ़ मनोरमा (पञ्च सन्ध्यन्त) 50 अंक

(ख) परिभाषेन्दु शेखर (प्रथम प्रकारान्त) 50 अंक

4. सामान्य दर्शन प्रथम पत्र के 'न्याय भाष्य' का 1 से 3 अध्याय तथा 'योग' 'सूत्र' 'भोजवृत्ति सहित' पढा जावे । इन दोनों पुस्तकों के अंक क्रमशः 60 व 40 किये जावें ।

5. वेदान्त प्रथम पत्र में 'ब्रह्म सूत्र—'शांकर भाष्य चतुः सूत्री मामती सहित (1 व 2 अध्याय) संशोधित किया जावे ।

6. धर्म शास्त्र प्रथम पत्र की पुस्तक 'याज्ञवल्क्य स्मृति' की 'प्रायश्चित्तसध्याय' हटाई जावे । इसी पत्र में 'मनु स्मृति' के (2 तथा 7 अध्याय) संशोधित किये जावें ।

7. पुराणोतिहास के प्रथम पत्र में निम्नलिखित पुस्तकें प्रति स्थापित की जावें ।

(क) विष्णु पुराण

(ख) महाभारत शान्ति पर्व

### शास्त्री-अन्तिम वर्ष

1. सामान्य संस्कृत प्रथम पत्र के 'क' भाग को निम्न प्रकार संशोधित किया जावे ।

(क) व्याकरण-कृदन्त, तार्दधत स्त्री प्रत्यय तथा लिंगानुशासन के आधार पर व्याकरण के प्रायोगिक प्रश्न एवं अशुद्धि संशोधन ।

2. इसी पत्र के 'घ' भाग में 'केनोऽपनिषद्' पुस्तक प्रति स्थापित की जावे ।
3. ऋग्वेद के द्वितीय पत्र के 'क' भाग को निम्न प्रकार संशोधित किया जावे ।  
 (क) सिद्धान्त कौमुदी—वैदिकी प्रक्रिया 30 अंक  
 (ख) प्रायोगिक परीक्षा—प्रथम पत्र पर आधारित— 50 अंक
4. अजुर्वेद के द्वितीय पत्र के 'क' भाग से '1 से 4 अध्याय' हटाई जावे तथा संशोधित अंक निम्न प्रकार रखे जावे ।  
 (क) 30 अंक (ख) 20 अंक  
 (ग) 50 अंक
5. व्याकरण के प्रथम पत्र में 'सिद्धान्त कौमुदी' रिजन्त प्रक्रिया से उत्तर कृदन्तान्त (उणादि रहित) 100 अंक 'शब्द प्रति स्थापित किये जावें ।
6. व्याकरण द्वितीय पत्र के 'क' भाग में 'परिभाषेन्दु शेखर' (द्वितीय) रखा जावे, जिसके 30 अंक होंगे तथा 'ख' भाग के 60 अंक निर्धारित किये जावे ।
7. साहित्य प्रथम पत्र के चारों भागों के '25-25' अंक निर्धारित किये जावें ।
8. सामान्य दर्शन प्रथम पत्र के 'क' भाग के सर्व दर्शन संग्रह के 50 अंक तथा 'ख' 'वेदान्त परिभाषा' के 50 अंक निर्धारित किये जावें ।
9. वेदान्त के द्वितीय पत्र के 'क' भाग को निम्न प्रकार संशोधित कर पढ़ा जावे ।  
 (क) ब्रह्म सूत्र—शांकर भाषा सहित (3 व 4 अध्याय)
10. न्याय के द्वितीय पत्र के 'क' भाग की पुस्तक के 50 अंक तथा 'ख' भाग में सामान्य निरुक्ति (अथ वेदान्त कल्पान्त) के 50 अंक और जोड़ा जावे ।

11. ज्योतिष प्रथम पत्र के 'क' भाग की पुस्तक 'सूर्य सिद्धान्त' के 'चन्द्र ग्रहण' के स्यान पर 'सूर्य ग्रहण' शब्द प्रतिस्थापित किये जावें ।
12. ज्योतिष के ही द्वितीय पत्र के 'क' भाग सूर्य सिद्धान्त' के उदयान्तविकार एवं भूगोलाध्याय 'प्रकरण रखें जावें ।
13. पुराणोत्तिहास के द्वितीय पत्र 'ख' भाग में 'इन्द्र विजय' (125 पृष्ठ तक) रखा जावे ।
14. आगम तथा तन्त्र के प्रथम पत्र के भाग में 'त्रिपुरा रहस्यम' का ज्ञान खंड' निर्धारित किया जावे ।

## परिशिष्ट-2

## संस्कृत संकाय

आचार्य (पूर्वाह्न तथा उत्तरार्द्ध) परीक्षा का पाठ्यक्रम तथा  
पाठ्य पुस्तकें सन् 1972-73

आचार्य परीक्षा दो वर्षों में सम्पन्न होगी। प्रत्येक वर्ष में चार चार प्रश्न पत्र होंगे। प्रत्येक प्रश्नपत्र का समय तीन घंटे का व 100 पूर्णाङ्क होंगे।

प्रथम वर्ष के चार पत्रों दो (प्रथम व द्वितीय पत्र) सामान्य (अनिवार्य) होंगे। तृतीय व चतुर्थ पत्र वैकल्पिक विशिष्ट विषय के होंगे।

द्वितीय वर्ष में प्रथम पत्र सामान्य (अनिवार्य) रहेगा, और शेष तीनपत्र वैकल्पिक विशिष्ट विषय के होंगे।

## प्रथम वर्ष

## प्रथम पत्र

## अनिवार्य

वैदिक साहित्य तथा तुलनात्मक भाषा विज्ञान पूर्णांक 100  
इस पत्र में अंकों का विभाजन निम्नांकित प्रकार से रहेगा:—

(अ)	1. वेद	35 अंक
	2. निरुक्त	15 अंक
(व)	1. भाषा विज्ञान	35 अंक
	2. संस्कृत भाषा की इतिहास	15 अंक

## पाठ्य ग्रन्थ (अ) भाग-वैदिक साहित्य—

1. कृष्णभाष्य संग्रह-देवराज चान्दना ।

प्रकाशक-मुंशीराम, मनोहरलाल, नई सड़क, दिल्ली-6

8, 11, 12, 16, 19, 20, 22, 23, 25, 26, 28, 31 तथा 33  
सूक्त सहित)

## 2. यास्कौय निरुक्त अध्याय-1

वैदिक व्याकरण के लिये निम्नांकित पुस्तकें अनुसंज्ञित हैं—  
वैदिक व्याकरण-लेखक उमेशचन्द्र पाण्डेय

वेदलावडम् डा० सुधीर कुमार गुप्त (प्रबन्धक भारतीय मंदिर अनु-  
संवान, आर० 2, विश्वविद्यालयपुरी, जयपुर)

(व) तुलनात्मक भाषाविज्ञान के तत्व

सामान्यवर्णन, क्षेत्र, ध्वनि यन्त्र की रचना, ध्वनी सम्बन्धी नियम,  
भाषाओं का वर्गीकरण, भारत यूरोपीय भाषा, परिवार के विशिष्ट  
संदर्भ सहित अर्थ विज्ञान ।

निर्धारित पाठ्यक्रम

गुरगो-एन इन्ट्रोडक्शन टू कम्परेटिव फिलोलोजी

(हिन्दी संस्करण)

बटकृष्ण घोष: लिग्विष्टिक इन्ट्रोडक्शन टू संस्कृत

(इण्डियन रिसर्च इन्स्टीट्यूट 170 मानकि तली गली, कलकत्ता)

डा० मंगलदेव शास्त्री-तुलनात्मक भाषा शास्त्र

भौलानाथ तिवारी-भाषा विज्ञान

डा० भौलाशंकर व्यास-संस्कृत का भाषा शास्त्रीय अध्ययन (भारतीय  
ज्ञानपीठ काशी, मूल्य 5)

तारापोर वाला: इलेमेन्ट आफ दी साइन्स आफ लैंग्वेज ।

अथवा

प्रथम पत्र

संस्कृत साहित्य तथा तुलनात्मक भाषा विज्ञान

पूर्णांक 100

इस पत्र में अंक विभाजन निम्नांकित प्रकार रहेगा—

- (अ) 1. संस्कृत साहित्य गद्य पद्य 30 अंक  
2. नाटक 20 अंक

- (ब) 1. भाषा विज्ञान 35 अंक  
2. संस्कृत भाषा का इतिहास 15 अंक  
पाठ्य ग्रन्थ संस्कृत साहित्य (अ भाग)

1. विहण-विक्रमांकदेवचरितम् (1:2)  
2. जयदेव विद्यालंकार-उत्तीर्ण लेखावलि  
3. विशाखतक्ष मुद्राराक्षस

(व) तुलनात्मक भाषा विज्ञान के तत्व

सामान्य वर्णन, क्षेत्र, ध्वनि की रचना, ध्वनि सम्बन्धी नियम, भार-

तीय यूरोपीय भाषा परिवार के विजिष्ट संदर्भ सहित अर्थविज्ञान भाषा और वर्गीकरण ।

### निर्धारित पाठ्य ग्रन्थ

- गुणो-एन इन्ट्रोडिक्शन टू कम्परेटिव फिलौलौजी (हिन्दी संस्करण)  
 वट्कृष्ण घोष-लिग्विस्टिक इन्ट्रॉडिक्शन टू संस्कृत  
 (इंडियन रिसर्च इन्स्टीट्यूट 170, मानिक तलीक, गली, कलकत्ता)  
 डा० मंगल शास्त्रीय तुलनात्मक भाषा शास्त्र  
 भोलानाथ तिवारी-भाषा विज्ञान  
 डा० मौलानाशंकर व्यास-संस्कृत का भाषा शास्त्रीय अध्ययन  
 (भारतीय ज्ञानपीठ काशी, मू० 5/-)  
 तारापोर वाला-एलीमेन्ट आफ दी साइन्स आफ लैंग्वेज  
 सीताराम चतुर्वेदी-भाषा शास्त्र  
 प्रो० धर्मेन्द्र नाथ शास्त्री-संस्कृत भाषा का इतिहास  
 टी वरो-दी संस्कृत लैंग्वेज

### टिप्पणी—

वैकल्पिक विजिष्ट विषय के अन्तर्गत वेद, (ऋग्वेद, यजुर्वेद साम-वेद, अथर्ववेद) विषय को लेने वाले उक्त प्रथम पत्र में संस्कृत साहित्य तथा भाषा विज्ञान विषयक पत्र ही लेंगे । वेद के अतिरिक्त अन्य विषय अर्थात्: व्याकरण, साहित्य, सामान्य दर्शन, वेदान्त, मीमांसा, न्याय ज्योतिष, जैन दर्शन, बौद्धदर्शन, पौरोहित्य, धर्म शास्त्र, पुराणे-तिहास, तथा आश्रम तथा तन्त्र विषय लेने वाले उक्त प्रथम पत्र में वैदिक साहित्य तथा भाषा विज्ञान विषयक पत्र ही लेंगे ।

जैन दर्शन, बौद्धदर्शन, ज्योतिष विषय लेने वाले परीक्षार्थी प्रश्न पत्र में इच्छानुसार कोई सा एक ले सकेंगे ।

### द्वितीय पत्र

पूर्णांक 100

प्राचीन भारत का साहित्य तथा सांस्कृतिक इतिहास इस पत्र में अंक विभाजित निम्नांकित प्रकार से होगा—

(अ) वैदिक साहित्य का इतिहास	25 अंक
(ब) लौकिक संस्कृत साहित्य का इतिहास	35 अंक
(स) सांस्कृतिक इतिहास	40 अंक

इस पत्र में निम्नांकित शीर्षक अव्ययनार्थ निर्दिष्ट है—

(अ) साहित्यिक इतिहास

1. वैदिक साहित्य-संहिता, ब्राह्मण, आरण्य, उपनिषद्, तथा सूत्र ।
2. रामायण, महाभारत पुराणसाहित्य ।
3. काव्य (महाकाव्य, खण्ड काव्य मुक्तक ऐतिहासिक काव्य)
4. नाट्य साहित्य
5. गद्यकाव्य
6. दर्शनासाहित्य
7. धर्मशास्त्र तथा अर्थ शास्त्र
8. काव्य शास्त्र
9. वैज्ञानिक साहित्य
10. लोक कथायें तथा नीतिकथायें ।

(ब) सांस्कृतिक इतिहास

1. भारत की संस्कृति तथा इतिहास (ऋग्वेद काल से ईसा से पूर्व 400 वर्ष तक)
2. प्राचीन भारत के स्मारक (मौर्यकाल से 1200 ई० तक)
3. भारत का औपनिवेशिक तथा सांस्कृतिक विस्तार ।

निर्धारित पाठ्यग्रन्थ

1. विन्टर निट्ज-हिस्ट्री आफ इन्डियन लिटरेचर वोल्यूम-1
2. कीथ-हिस्ट्री आफ संस्कृत लिटरेचर
3. एस० के० डे० तथा दास गुप्ता-हिस्ट्री आफ क्लासिकल संस्कृत लिटरेचर ।
4. आर० के० मुकर्जी-हिन्दू रचना, अनुवादक वानुदेवशरण अग्रवाल प्रकाशक भारतीय विद्याभवन. बम्बई मू० 20/-)
5. कीथ-संस्कृत ड्रामाज
6. कैम्ब्रिज हिस्ट्री आफ इन्डिया वोल्यूम नं० 1 (केवल अव्ययन 2 से 10 तथा 16 वां)

संदर्भ ग्रन्थ—

1. बलदेव उपाध्याय-वैदिक साहित्य और संस्कृति (जारदामंदिर, गणेश दीक्षित काशी) मू० 5-50
2. बलदेव उपाध्याय-संस्कृत साहित्य का इतिहास (जारदा मंदिर काशी)



3. नैकडानल-इन्डियाज पास्त
4. डा० रामजी उपाध्याय-भारतस्य सांस्कृतिक निधि ।  
प्रकाशक, सागर विश्वविद्यालय, सागर (मूल्य 10/-)
5. डा० रामजी उपाध्याय-संस्कृत साहित्य का आलोचनात्मक इतिहास (प्रकाशक-रामनारायणलाल देवी माधव इलहाबाद नू 10/-)
6. वाचस्पति गैरोला-संस्कृत साहित्य का इतिहास

### वैकल्पिक विशिष्ट विषय

निम्नांकित विषयों में से कोई एक विषय ग्रह्य होगा ।

प्रथम वर्ष में जिसके दो पत्र (तृतीय और चतुर्थ) प्रश्न पत्र होंगे ।  
प्रत्येक प्रश्न पत्र के पूर्णांक 100 होंगे ।

#### (1) ऋग्वेद (प्रयोगिक सहित)

1. पत्र.....अनिवार्य प्रथम पत्र 100 अंक
2. पत्र.....अनिवार्य द्वितीय पत्र 100 अंक
3. पत्र (क) ऋक्संहिता द्वितीय मण्डल  
के आरम्भ से 25 सूक्त 40 अंक )  
(ख) ऋग्वेद भाष्य भूमिका 20 अंक )  
(ग) जैननीय न्यायनाला 1 ) 100 अंक  
अध्याय 20 अंक )  
(ए) निरुक्त (देवकाण्ड) 20 अंक )
4. पत्र (क) ऋक्संहिता 1, 3, 7, 10  
मंडलों के 40 सूक्त  
(सायणभाष्यसहित 70 अंक )  
(ख) ऋग्वेद प्रातिशास्त्र [1 से ) 100 अंक  
5 अध्याय) 30 अंक )

#### वा (1) शुक्लयजुर्वेद (प्रयोगिक सहित)

1. पत्र.....अनिवार्य प्रथम पत्र 100 अंक
2. पत्र.....अनिवार्य द्वितीय पत्र 100 अंक
3. पत्र (क) शुक्ल यजुः संहिता 1 से 10 अध्याय  
संस्कृतभाष्य सहित 40 अंक )

- (ख) जैमिनीयन्यायमाला 1 अध्याय 20 अंक )  
 (ग) निरुक्त (दैवतकाण्ड) 20 अंक )  
 (घ) ऋग्वेद भाष्य भूमिका 20 अंक )

4. पत्र... (क) शुक्लयजुः संहिता 11 से 18

- अध्याय उव्वट भाष्यसहित 40 अंक )  
 (ख) जैमिनीयन्यायमाला 1 अध्याय 20 अंक )  
 (ग) निरुक्त (दैवतकाण्ड) 20 अंक )  
 (घ) ऋग्वेद भाष्य भूमिका 20 अंक )

या (1) सामवेद (प्रयोगिक सहित)

1. पत्र अनिवार्य प्रथम पत्र 100 अंक  
 2. पत्र अनिवार्य द्वितीय पत्र 100 अंक  
 3. पत्र (क) सामसंहिता सायण भाष्यसहित सैन्द्र  
 पवन्ति 40 अंक )  
 (ख) निरुक्त (दैवतकाण्ड) 20 अंक )  
 (ग) जैमिनीय न्यायमाला 100 अंक  
 1 अध्याय 20 अंक )  
 (घ) ऋग्वेद भाष्य भूमिका 20 अंक )

4. पत्र

- (क) सामविधान ब्राह्मण 1 प्रपाठक  
 सभाष्य 50 अंक )  
 (ख) पडविशब्राह्मण 1 प्रपाठक 100 अंक  
 सभाष्य 50 अंक )

यां (1) अथर्ववेद (प्राथमिक सहित)

1. पत्र अनिवार्य प्रथम पत्र 100 अंक  
 2. पत्र अनिवार्य द्वितीय पत्र 100 अंक

तृतीय पत्र

- (क) अथर्ववेद संहिता 3, 4 काण्ड सायण  
 भाष्य सहित 40 अंक )  
 (ख) ऋग्वेद भाष्यभूमिका 20 अंक ) 100 अंक  
 (ग) जैमिनीय न्यायमाला 1 अध्याय 20 अंक )  
 (घ) निरुक्त (दैवतकाण्ड) 20 अंक )

## चतुर्थ पत्र

(क) अथर्ववेद संहिता 5 से 7 काण्ड सायण

भाष्य सहित 50 अंक )

(ख) अथर्वसंहिता 1 से 2 काण्ड सभाष्य भूमिका ) 100 अंक

सहित 50 अंक )

## (2) व्याकरण

1. पत्र अनिवार्य प्रथम पत्र 100 अंक

2. पत्र अनिवार्य द्वितीय पत्र 100 अंक )

3. पत्र (क) लघु शब्देन्दुशेखर-पंचसंध्यन्त 80 अंक ) 100 अंक

(ख) वाच्य प्रदीप-प्रथम काण्ड 20 अंक )

4. पत्र-लघु शब्देन्दुशेखर-अजनतपुल्लिग

से स्त्री प्रत्ययान्त 100 अंक

## (3) साहित्य

## प्रथम वर्ष

1. पत्र अनिवार्य प्रथम-पत्र

2. पत्र अनिवार्य द्वितीय पत्र

3. पत्र काव्य प्रकाश 100 अंक

4. पत्र ध्वन्यालोक 100 अंक

## (4) सामान्य दर्शन

प्रथम पत्र अनिवार्य प्रथम पत्र

द्वितीय पत्र अनिवार्य द्वितीय पत्र

## तृतीय पत्र

(क) कुसुमान्जलि-हरिदासीय 75 अंक )

(ख) संशयच्छेदवाद-पं. मधुसूदनभा कृत 25 अंक ) 100 अंक

## चतुर्थ पत्र

(क) शास्त्र दीपिका-तर्कपाद 50 अंक

(ख) शावरभाष्य-प्रथमाध्याय 50 अंक

## (5) वेदान्त

1. पत्र अनिवार्य प्रथम पत्र

2. पत्र अनिवार्य द्वितीय पत्र

- |                                    |         |
|------------------------------------|---------|
| 3. पत्र अद्वैतसिद्धि-प्रथमपरिच्छेद | 100 अंक |
| 4. पत्र चित्तुली.....              | 100 अंक |

अथवा

सिद्धान्तलेखसंग्रह

### (6) मीमांसा

- |   |         |
|---|---------|
| 1. पत्र अनिवार्य प्रथम                      | 100 अंक |
| 2. पत्र अनिवार्य द्वितीय पत्र               | 100 अंक |
| 3. पत्र (क) शास्त्र दीपिका 7 से 12<br>व्याय | 70 अंक  |
| (ख) मीमांसानुक्रमणिका-मण्डनमिश्र            | 30 अंक  |
|   | 100 अंक |
| 4. पत्र (क) शावरभाष्य 1, 2 अध्याय           | 70 अंक  |
| (ख) न्यायरत्नमाला नित्यकाम्य<br>विवेकान्त   | 30 अंक  |
|   | 100 अंक |

### (7) न्याय

- |  |         |
|--|---------|
| 1. पत्र अनिवार्य प्रथम पत्र  | 100 अंक |
| 2. पत्र द्वितीय पत्र   | 100 अंक |
| 3. पत्र व्युत्पत्तिवाद (प्रथमकारक व<br>द्वितीय कारक का प्रथम खण्ड) | 100 अंक |
| 4. पत्र (क) कुनुमान्जली हरिदासीय<br>विवृतिसहित                     | 60 अंक  |
| (ख) ग्रामाण्यवाद गादावरी-प्रथम<br>विक्रितियति पर्यन्त              | 40 अंक  |
|  | 100 अंक |

### (8) ज्योतिष

- |   |      |
|---|------|
| 1. पत्र ..... अनिवार्य प्रथम पत्र .....                     | 100  |
| 2. पत्र .... अनिवार्य द्वितीय पत्र .....                    | 100  |
| 3. पत्र (क) सिद्धान्तशिरोमणि-गणितव्याय<br>(ग्रहणाधिकारान्त) | 60 ) |
| (ख) पंचस्वरा-प्रजापतिदास                                    | 20 ) |
| (ग) उपपत्तीन्दुशेखर-उपोद्घातमात्र                           | 20 ) |
| (म०म० दुर्गाप्रसाद द्विवेदी)                                | 100  |

4. पत्र (क) सिद्धान्तशिरोमणि-गोलाध्याय	60 )	
(ख) वास्तवचन्द्रकूडोन्तिसाधन	40 )	100
(म०म० सुधाकरद्विवेदी)		

## (9) जैन दर्शन

1. पत्र ..... अनिवार्य प्रथम पत्र .....	100	
2. पत्र ..... अनिवार्य द्वितीय पत्र .....	100	
3. पत्र (क) सम्मतितर्क (पूर्वार्द्ध) .....	50 )	
(ख) पञ्चास्तिकाय .....	50 )	100
4. पत्र (क) सम्मतितर्क (उत्तरार्द्ध) .....	50 )	
(ख) राजवार्त्तिक (पञ्चमाध्याय से समाप्ति तक )	50 )	100

## (10) बौद्ध दर्शन

1. पत्र ..... अनिवार्य प्रथम पत्र .....	100	
2. पत्र ..... अनिवार्य द्वितीय पत्र .....	100	
3. पत्र (क) प्रमाणवार्त्तिक धर्म कीर्ति-मनोरथान्दिवृत्ति सहित)	70 )	100
(ख) विसद्धिमग्गो-बुद्धघोष कृत	30 )	
4. पत्र (क) तत्त्वसंग्रह-शान्तिराश्रितकृत (प्रमाण, प्रत्यक्ष परिच्छेद)	50 )	100
(ख) माध्यमिककारिक चन्द्रकसती (नागार्जुन)	50 )	

## (11) परोहित्य

1. पत्र ..... अनिवार्य प्रथम पत्र .....	100	
2. पत्र ..... अनिवार्य द्वितीय पत्र .....	100	
3. पत्र (क) शुक्लयजुः संहिता 1 से 10 अध्याय सस्वर सहित)	75 )	100
(ख) जतपथब्राह्मण प्रथम अध्याय सायणभाष्य सहित )	25 )	
4. पत्र (क) अनुष्ठानप्रकाश .....	35 )	
(ख) गायत्रीपुस्तचरण पद्धति सहायकग्रन्थ-गायत्री पञ्चांग .....	35 )	100

(ग) शतचण्डी प्रयोग ..... 30 )

सहायकग्रन्थ-सप्तशतीसर्वस्व-

(सरयूप्रसाद द्विवेदी)

(12) धर्म शास्त्र

1. पत्र ..... अनिवार्य प्रथम पत्र ..... 100
2. पत्र ..... अनिवार्य द्वितीय पत्र ..... 100
3. पत्र-वीरमित्रोदय (व्यवहारप्रकाश तथा संस्कार प्रकाश )
4. पत्र (क) निरुणयसिन्धु (द्वितीय व तृतीय परिच्छेद) 50 )
- (ख) धर्मसिन्धु (तृतीय परिच्छेद) 50 ) 100

(13) पुराणेतिहास

1. पत्र ..... अनिवार्य प्रथम पत्र ..... 100
2. पत्र ..... अनिवार्य द्वितीय पत्र ..... 100
3. पत्र (क) विष्णुपुराण ..... 50 )
- (ख) श्रीमद्भागवत् दशमस्कन्ध (उत्तरार्द्ध व 50 ) 100
- एकादश स्कन्ध )
4. पत्र (क) मार्कण्डेयपुराण ..... 50 )
- (ख) महाभारत-शान्तिपर्व ..... 50 ) 100

(14) आगम

1. पत्र ..... अनिवार्य प्रथम पत्र ..... 100
2. पत्र ..... अनिवार्य द्वितीय पत्र ..... 100
3. पत्र (क) योगिनी हृदयम्
- अमृतानन्दकृतदीपिका सहित 50 ) 100
- (ख) शिवहृष्टि-सोमानन्दकृत 50 )
4. पत्र (क) ईश्वरप्रत्यभिज्ञा ..... 50 )
- विभर्षिनीयुता शातिधिकारान्ता ) 100
- (ख) सप्तशतीसर्वस्वम्-सटीक ..... 50 )
- (आचार्य सरयूप्रसाद द्विवेदी)

आचार्य द्वितीय वर्ष

पाठ्य क्रम व पाठ्य पुस्तकें

अनिवार्य पत्र

भारतीय धर्म एवं दर्शन

इस पत्र में अंक विभाजन निम्न प्रकार रहेगा ।

धर्म	) 30 अंक
दर्शन (सांख्य न्याय. वेदान्त)	)
चार्वाक वौद्ध तथा जैन)	) 70 अंक

पाठ्य ग्रन्थ—

1. याज्ञवल्क्य स्मृति (आचाराध्याय-गृहस्य धर्म प्रकारण से संपूर्ण)	20 अंक
2. तर्क भाषा (शब्द खंडान्त)	20 अंक
3. सांख्य कारिका	20 अंक
4. वेदान्त सार	20 अंक
5. द्रव्य संग्रह	10 अंक
6. चार्वाक दर्शन (सर्व दर्शन के आधार पर)	10 अंक

अथवा

संस्कृत साहित्य

इस पत्र में अंक विभाजन निम्न प्रकार रहेगा ।

संस्कृत साहित्य (गद्य, पद्य)	50 अंक
नाटक	25 अंक
पाली तथा प्राकृत	25 अंक

पाठ्य ग्रन्थ—

1. विक्रमांक देव चरित (1 व 2 सर्ग)  
विल्हनी
2. उल्कीर्ण लेखान्जलि—ऋग्वेद विद्यालंकार
3. मुद्रा राक्षस विशारद दत्त
4. पाली प्राकृत अपभ्रंश संग्रह—पांड्य व मिश्र  
(1 से 4 तथा 6 जातक, ध्वन्यपदन संग्रह, गिरनार  
अभिलेख, होलियो डोरस का अभिलेख प्रथम पन्द्रह  
गाथायें, स्वप्न वासवदत्त का अंश

टिप्पणी—

वैकल्पिक विधिष्ट के अन्तर्गत सामान्य दर्शन न्यायवेदान्त मीमांसा ।  
जैन दर्शन । वौद्ध दर्शन । धर्म शास्त्र विषय लेने वाले उक्त तृतीय पत्र में संस्कृत

साहित्य विषयक पत्र ही लेंगे । वेद । व्याकरण । साहित्य । ज्योतिष । पौरोहित्य । पुराणेतिहास । आगम विषय लेने वाले उक्त तृतीय पत्र में भारतीय धर्म एवं दर्शन विषयक पत्र ही लेंगे ।

वैकल्पिक विशिष्ट विषय—

निम्नांकित विषय में से कोई एक विषय ग्राह्य होगा ।

(1) ऋग्वेद ( प्रायोगिक सहित )

पत्र संख्या	ग्रन्थ	पूर्णांक
प्रथम पत्र	अनिवार्य पत्र	100
द्वितीय पत्र	(क) ऐतरेय ब्राह्मण	60 अंक
	(आरम्भ से 10 अध्याय)	
	(ख) ऐतरेयोपनिषद् सभाष्य	20 „
	(ग) कौशिलकी उपनिषद्	20 „

तृतीय पत्र

(क) आश्वलायन श्रौत सूत्र	
आरंभ से सोमभार्ग प्रकरणान्त	50 अंक
(ख) प्रायोगिक सौमिक होम प्रयोग	50 अंक

चतुर्थ पत्र—वैद विज्ञानम्

(क) विज्ञान-विद्युत् छन्दोम्यस्ता	15 „
(ख) शारीरिक विज्ञानम्	30 „
(ग) शारीरिक विमर्श	25 „
(घ) ब्रह्म सिद्धान्त	30 अंक

अथवा

(क) श्रौत पदार्थ निर्वचन	40 अंक
(ख) ऐतरेयालोचन-सत्यव्रत सामश्रयी	30 अंक
(ग) स्मार्तिलास (प्रथम भाग)	30 अंक

अथवा

(क) स्वशास्त्रीय निबंध	35 अंक
(ख) वेद साहित्य का आलोचनात्मक इतिहास	35 अंक
(ग) वेद शास्त्र (माइयोलोजी का आलोचनात्मक अध्ययन ।	30 अंक



सहायक पुस्तकें—

1. वैदिक साहित्य और संस्कृति-वलदेव उपाध्याय
2. हिस्ट्री आफ इंडियन लिट्रेचर-विष्ट (निल्ज वोल्थून) 1
3. ऋग्वेदिक कल्चर-ए० सी० दास
4. वैदिक इंडिया-डा० एल० रेणु
5. इंडियाज पास्ट-मैक्स मूलर
6. वेद रहस्य-श्री अरविन्द
7. काल्यायन श्रौत सूत्रभाष्य भूमिका-विद्यावर शास्त्री
8. वैदिक माइथालोजी-मैकडानल

अथवा

लघु प्रबन्ध

लघु प्रबन्ध नियम—

1. जो छात्र आचार्य पूर्वार्ध परीक्षा में 55 प्रतिशत अंक प्राप्त करेंगे, उन्हें इस पत्र के अन्तर्गत संस्कृत माध्यम से वैकल्पिक दिशिष्ट विषय पर आधारित उच्च स्तरीय लघु प्रबन्ध लिखने की अनुमति प्रदान की जावेगी ।

2. लघु प्रबन्ध विषयक पत्र लेने की अनुमति केवल महाविद्यालय अभ्याथियों को ही दी जावेगी ।

3. लघु प्रबन्ध किसी निर्देशक के निर्देशन से ही लिखा जावेगा । यह निर्देशक या तो किसी महाविद्यालय के अधिस्तातर (पोस्ट ग्रेजुएट) विभाग का प्राचार्य । आचार्य होगा अथवा प्राचार्य द्वारा निर्वाचित वह वरिष्ठ प्राध्यापक होगा जो अधिस्तातक (पोस्ट ग्रेजुएट) कक्षाओं को अध्ययन कराता हो ।

4. निर्देशन दो अभ्याथियों से अधिक एक समय में नहीं ले सकेंगे ।

5) लघु प्रबन्ध के विषय का निर्धारण सम्बन्ध महाविद्यालय के प्राचार्य सम्बन्ध विषय के आचार्य की सहमति 10 अगस्त तक करेंगे ।

6) किसी महाविद्यालय के अभ्याथियों द्वारा गृहीत विषयों की सूची संस्कृत संकाय के अन्तर्गत अध्ययन मंडल के संयोजक को 20 अगस्त तक प्रेषित की जावेगी, जो यह देखेगा कि किसी लघु प्रबन्ध के जीर्णक की आवृत्ति तो नहीं हो रही है । यदि एक ही विषय एक से अधिक अभ्याथियों

द्वारा गृहति किया गया हो तो जिसकी सूचना पहले प्राप्त होगी उसे ही उस विषय का लघु प्रबन्ध लिखने की अनुमति दी जावेगी । लघु प्रबन्ध के विषयों का निर्णय अंतिम समय 31 जुलाई तक हो जाना चाहिये तथा इसकी सूचना संकाय के अन्तर्गत अव्ययन मंडल के संयोजक द्वारा सम्बन्ध महाविद्यालय के प्राचार्य । आचार्य व अम्यर्थी को 31 जुलाई तज प्रेषित करदी जानी चाहिये ।

7) लघु प्रबन्ध टंकित फुल स्केप आकार के 75 पृष्ठों से न्यून और 100 पृष्ठों से अधिक नहीं होगा ।

8) अम्यर्थी परीक्षा से पूर्व 15 मार्च तक अपने निर्देशक द्वारा अग्रेसरहित लघु प्रबन्ध की तीन प्रतियां महाविद्यालय के प्राचार्य द्वारा कुल-सचिव को प्रेषित करेगा ।

9) लघु प्रबन्ध दो बाह्य परीक्षकों द्वारा जांचा जायेगा यदि दोनों परीक्षकों में मतभेद होगा तो दोनों परीक्षकों के द्वारा प्रदत्त अंकों का योग लेकर उसका औसत ग्रहण किया जायेगा ।

10) निर्देशक द्वारा एक घंटा प्रति सप्ताह प्रति अम्यर्थी लघु प्रबन्ध के के लिये दिया जायेगा तथा उपस्थिति नियमित रूप में अंकित की जायेगी ।

#### या (1) शुक्ल सजुर्वेद

पत्र संख्या	ग्रन्थ	पूर्णांक
प्रथम पत्र	अनिवार्य	100
द्वितीय पत्र		

(क) काल्यायन श्रोत सूत्र- द्वितीय अध्याय से सोमयागान्त 60 अंक

(ख) काल्यायन प्रतिशाख्य 1 से 4 अध्याय 40 अंक

#### तृतीय पत्र

(क) श्रोत पदार्थ निर्वचन	25 अंक
(ग) यज्ञ तत्त्व प्रकाश	25 अंक
(ग) प्रायोगिक परीक्षा	50 अंक

1) वचनात्मक महारुद्र प्रयोग—

श्री दुर्गाशंकर शास्त्री

2) काल्यायन श्रोत सूत्र-देव याज्ञिक

पद्धति के अनुसार श्रोतावान

## चतुर्थ पत्र—

(क) स्वशास्त्रीय निबन्ध	35 अंक
(ख) वैदिक साहित्य का आलोचनात्मक इतिहास	35 अंक
(ग) देव शास्त्र (माइथालॉजी) का आलोचनात्मक अध्ययन	30 अंक

## सहाशक पुस्तकें—

## ऋग्वेदवत

अथवा

लघु प्रबन्ध

या (1) सामदेव

पत्र संख्या	ग्रन्थ	पूर्णांक
प्रथम	अनिवार्य	100 अंक

## द्वितीय पत्र

(क) ताडव महा ब्राह्मण प्रथम पंचिका चितुस्वामी कृति भूमिका सहित	50 अंक
(ख) छान्दोग्य उपनिषद् सभाष्य	40 अंक
(ग) केन उपनिषद् सभाष्य	10 अंक

## तृतीय पत्र

(क) श्रौत पदार्थ निर्वचन	30 अंक
(ख) मंत्र ब्राह्मण—प्रथम प्रपाठक	20 अंक
(ग) प्रायोगिक परीक्षा	50 अंक

(अग्निष्टोमा पद्धति से औद्यमनम प्रयोग

विष्णु भाग रूद्रकुण्ड मंडप ज्ञान)

## चतुर्थ पत्र

(क) स्वशास्त्रीय निबंध	35 अंक
(ख) वेद साहित्य का आलोचनात्मक इतिहास	35 अंक
(ग) देव शास्त्र (माइथालॉजी का आलोचनात्मक अध्ययन)	30 अंक

सहायक पुस्तकें

ऋग्वेद वत्

अथवा

लघु प्रबंध

या (1) अथर्ववेद (प्रायोगिक सहित)

पत्र	ग्रन्थ	पूर्णांक
प्रथम	अनिवार्य	100

द्वितीय

(क) गोपय ब्राह्मण	50 अंक
(ख) मांडूवयोपनिषद्	20 अंक
(ग) प्रश्नोपनिषद्	30 अंक

तृतीय पत्र

(क) श्रौत पदार्थ निर्वाचन	20 अंक
(ख) अथर्ववेदीय अनुक्रमणिका	20 अंक
(ग) प्रायोगिक परीक्षा	60 अंक

(राज्य प्रथमा भिषेक, अथर्ववेदीय महा शान्ति पद्धति, कोटि होम विधि अग्नि होत्र विधि)

चतुर्थ पत्र

(क) स्वशास्त्रीय निबंध	35 अंक
(ख) वेद साहित्य आलोचनात्मक इतिहास	35 अंक
(ग) देव शास्त्र का आलोचनान्मक अध्ययन	30 अंक

सहायक पुस्तकें—ऋग्वेद वत्

अथवा

लघु प्रबंध

या (2) व्याकरण

पत्र	ग्रन्थ	पूर्णांक
प्रथम पत्र	अनिवार्य	100

## द्वितीय

(क) लघु शब्देषु शेखर-कारक तथा अव्ययी भावान्त	50 अंक
(ख) लघु मंजूषा स्फोट निरूपरान्त	50 अंक

## तृतीय पत्र

(क) नवाविषयक महाभाष्य	80 अंक
(ख) परिभाषेन्दु शेखर (तृतीय तंत्र)	20 अंक

## चतुर्थ पत्र

(क) स्वविषयक निबन्ध	35 अंक
(ख) व्याकरण शास्त्र का आलोचनात्मक इतिहास	35 अंक
(ग) न्याय सिद्धान्त जम्बावली (शब्द खंड)	30 अंक

## सहायक पुस्तकें

- (1) भाषा तत्व और वाक्य पदों डा० सत्यकाम वर्मा
- (2) स्फोट वाद नागेश भट्ट

## अथवा

विशिष्ट वैयाकरण का अध्ययन	100 अंक
निम्नांकित में से कोई एक— पाणिनि, कात्यायन, पतंजलि, भरतृहरि, (कोई भी प्रमाणित पुस्तकें अवित्तव्य है)	

## अथवा

लघु प्रबन्ध	100 अंक
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## या (3) साहित्य

## आचार्य द्वितीय वर्ष

पत्र सं०	ग्रन्थ	पूर्णांक
प्रथम पत्र	अनिवार्य	100
द्वितीय पत्र	रस गंगाधर (उपमान्त)	100
तृतीय पत्र	(1) नयन महाकाव्य-1 से 5 सर्ग 40 (2) विक्रमांक देव चरित-1 से 5 सर्ग	100 30

	(ग) वक्रोचित जीवित-1, 2	
	उन्मेश	30
चतुर्थ पत्र	(क) स्वविषयक निबन्ध	35 100
	(ख) काव्य शास्त्र का आलोच- नात्मक इतिहास	35
	(ग) संस्कृत पद्य रचना	30

‘ख’ भाग के सहायक ग्रन्थ

- (1) काव्य तत्व समीक्षा डा० न० ना० चौधरी
- (2) समकन्तेपट्स आफ अलंकार शास्त्र—  
डा० वे० राघवन्
- (3) स्टडीज इन दी हिस्ट्री आफ संस्कृत  
पायाटिक्स—एस० के० डे०
- (4) स्टडीज आफ संस्कृत पायाटिक्स—  
पी० वी० काणे,
- (5) नम्बर आफ रसान - डा० वे० राघवन्

‘ग’ भाग के सहायक ग्रन्थ

- (1) कवि रहस्य : हलायुधकृत
- (2) विदग्धमुख मण्डन : धर्मदास कृत
- (3) कवि कल्पलता : देवेश्वर कृत
- (4) काव्य नीमांसा : राजेश्वर कृत
- (5) समस्वा समज्या : श्री रामशास्त्र  
भागवताचार्य कृत

अथवा

विशेष कवि अव्ययन 100

निम्नलिखित के से कोई एक

वाल्मीकि, मात्स्य, कालिदास, भारवि, माघ, बाण

सहायक पुस्तकें—

- (1) संस्कृत साहित्य का इतिहास : बलदेव उपाध्याय
- (2) संस्कृत साहित्य का इतिहास : वाचस्पति गौरेला

(15) इंडियन फिलासफी : डा० राधाकृष्णन

(16) भारतीय दर्शन शास्त्र का इतिहास : डा० देवराज तिवारी

(ग) सुकरात, प्लेटों, अरस्तू, डिस्कार्टेस, स्पिनोजा लैबनिट्स,  
लाक, वकॅली, ह्यूम और कैंटके दार्शनिक विचार

सहायक पुस्तकें:—

(1) पाश्चात्य दर्शन : ए० के० वर्मा

(2) पाश्चात्य दर्शन : सी० डी० शर्मा

(3) पाश्चात्य दर्शन : रामावतार

(4) पाश्चात्य दर्शन का इतिहास : गुलाबराय

अथवा

चतुर्थ पत्र—लघु प्रबन्ध

100

या (5) वेदान्त

पत्र संख्या	ग्रन्थ	पूर्णांक
प्रथम पत्र	अनिवार्य	100
द्वितीय पत्र	(क) खण्डन-खण्ड-खाद्य	100
तृतीय पत्र	(क) बृहदारण्यकोपनिषद् 1 से 4 अध्याय शंकर भाष्य सहित	100
	(ख) सिद्धान्त लेख संग्रह :	

चतुर्थ पत्र

(क) स्व विषयक निबन्ध	30	100
(ख) वेदान्त का आलोचनात्मक अध्ययन	35	
(ग) पाश्चात्य दर्शन का सामान्य अध्ययन	35	

टिप्पणी—इस पत्र की सहायक पुस्तकें सामान्य  
दर्शन के चतुर्थ पत्र के पाठ्यक्रम में  
दी गई हैं ।

## (चतुर्थ पत्र)

अथवा

चतुर्थ पत्र—लघु प्रबन्ध 100

या (6) मीमांसा—

पत्र सं०	ग्रन्थ	पूर्णांक
प्रथम पत्र	अनिवार्य	100
द्वितीय पत्र	(क) श्लोक कार्तिक : शून्यवादान्त	50 100
	(ख) तन्त्र वार्त्तिक : शून्यकारान्त	50
तृतीय पत्र	(क) भाट्ट रहस्य : द्वितीयकारान्त	50 100
	(ख) भाट्ट कौस्तुभ : द्वितीयाव्याय	50
चतुर्थ पत्र	(क) स्व विषयक निबन्ध	35
	(ख) मीमांसा दर्शन का आलोचनात्मक इतिहास	35

सहायक पुस्तकें—

(1) हिस्ट्री आफ मीमांसा : डा० गंगानाथ झा

(2) मीमांसा दर्शन : डा० मण्डन मिश्र

(ग) पाश्चात्य दर्शन का सामान्य अध्ययन 30

टिप्पणी—इस पत्र के (ग) अंश के लिए सहायक पुस्तकें सामान्य दर्शन के चतुर्थ पत्र के पाठ्यक्रम में दी गई हैं ।

अथवा

चतुर्थ पत्र—लघु प्रबन्ध 100

या (7) न्याय

पत्र सं०	ग्रन्थ	पूर्णांक
प्रथम पत्र	अनिवार्य	100
द्वितीय पत्र	(क) शक्तिवाद-सामान्य कान्ड	50 ) 100



	(ख) शब्द शक्ति प्रकाशिका (नाम प्रकरणान्त)	50 )	
तृतीय पत्र	(क) वैशेषिक सूत्रोद्धार	60 )	100
	(ख) संगीत गाढाधरी	40 )	
चतुर्थ पत्र	(क) स्व-विषयक निबन्ध	35	100
	(ख) न्याय का आलोचनात्मक इतिहास	35	
	(ग) पाश्चात्य दर्शन का सामान्य अध्ययन	30	

टिप्पणी—इस पत्र के (ग) अंश के लिए सहायक पुस्तकें सामान्य दर्शन के चतुर्थ पत्र के पाठ्यक्रम में दी गई हैं।

सहायक पुस्तकें — (क-ख)

- (1) न्याय वैशेषिक : हरिमोहन झा
- (2) न्याय परिचय : फणि भूपण भट्टाचार्य
- (3) नव्य न्याय का इतिहास : म० म० डा० उनेश मिश्र
- (4) न्याय वैशेषिक फिलासिफी—भादुरी
- (5) हिस्ट्री आफ नव न्याय : दिनेशचन्द्र भट्टाचार्य
- (6) न्याय थ्योरी आफ नालेज : एस० सी० चटर्जी

अथवा

चतुर्थ पत्र —	लघु प्रबन्ध	100
	या (8) ज्योतिष (प्रायोगिक सहित)	
पत्र सं०	ग्रन्थ	पूर्णांक
प्रथम पत्र	अनिवार्य	100
द्वितीय पत्र	(क) सिद्धान्त तत्त्व विवेक- त्रिप्रश्नाधिकारान्त	60
	(ख) बृहत् संहिता—(अर्त्तकाण्डाध्याय, दकागर्ल गर्भधारणाध्याय, वास्तु विद्या, मत्स्यजात)	40

तृतीय पत्र (क) सिद्धान्तत्व विवेक 50  
(विम्बाविकार, उदयास्ताविकार,  
चन्द्र सूर्य-ग्रहणाविकार मात्र)

(ख) प्रायोगिक 50

(1) पञ्चांग प्रकरण 20

(अ) भकरंद के आधार पर तिथि नक्षत्र  
योग, करण और संक्रान्ति का  
साधन ।

(आ) ज्योतिर्गणित दृश्यगणित के आधार  
पर ग्रह स्पष्ट, ग्रहण और ग्रहों  
का उदयास्त साधन ।

(2)

(ई) ज्योतिषयन्त्रालय वेध 30  
यन्त्र निर्माण प्रक्रिया सहित सम्पूर्ण  
यन्त्रों से वेध प्रणाली का सम्यक्  
बोध ।

सहायक ग्रन्थ—

यन्त्रालय वेध प्रत्यप्रदर्शिका-पं० गोकुलचन्द्र भावन ।

चतुर्थ पत्र

(क) भाग

(1) स्वविषयक इतिहास — | 25 अंक

(2) स्वविषयक निबन्ध — 25 अंक

सहायक ग्रन्थ

(2) गणकतरंगिणी-म०म० सुधाकर द्विवेदी

(2) भारतीय ज्योतिषशास्त्र का इतिहास-

शंकर बालकृष्ण दीक्षित

(ख) आर्यभटीयम्- 10 अंक

(ग) संग्राहली-(कल्याणवर्मा कृत) 40 अंक

प्राग्भ से 40 अध्याय ।

(अथवा)

लघु प्रबन्ध—

100 अंक

## या (9) जैन दर्शन

पत्र सं०	ग्रन्थ	पूर्णांक
प्रथम पत्र	अनिवार्य	100
द्वितीय पत्र	प्रवचन सार : आचार्य कुन्दकुन्द	100
तृतीय पत्र	(क) अष्ट सहस्री 70 ) (ख) पुरुषार्थ सिद्ध्युपाय 30 )	100
चतुर्थ पत्र	(क) स्व विषयक निबन्ध 35 ) (ख) जैन दर्शन का आलोचनात्मक इतिहास 35 ) (ग) पाश्चात्य दर्शन का सामान्य अध्ययन 30 )	

टिप्पणी—इस पत्र के (ग) अंश की सामान्य पुस्तकें सामान्य दर्शन के चतुर्थ पत्र के पाठ्यक्रम में दी गई हैं।

सहायक पुस्तकें—(क, ख)

- (1) जैन दर्शन : महेन्द्र कुमार न्यायाचार्य
- (2) न्याय विनिश्चय ग्रन्थ : महेन्द्र कुमार न्यायाचार्य
- (3) जैन साहित्य और इतिहास : तत्त्वार्थ की श्रुत-सागरीय वृत्ति की प्रस्तावना—  
ले० पं० नाथूराम प्रेमी

अथवा

चतुर्थ पत्र	लघु प्रबन्ध	100
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## या (10) बौद्ध-दर्शन

पत्र सं०	ग्रन्थ	पूर्णांक
प्रथम पत्र	अनिवार्य	100
द्वितीय पत्र	(क) सद्धर्म पुण्डरीक (1 से 3 सूत्र) 50 (ख) आत्म तत्त्व विवेक (अथ नैगमाद निराकरण) 50	100

तृतीय पत्र	(क) आलम्बन परीक्षा-दिउनाय	30	100
	(ख) ज्ञान श्री निबन्धावली	20	
	(ग) रत्नकीर्ति निबन्धावली	20	
	(घ) प्रमेयकमल मार्तण्ड निर्विकल्प प्रत्यक्षवाद निराकरण	30	

अथवा

तृतीय पत्र			100
	(क) कुमारिल कृत श्लांका वातिकि का निरालम्बवाद, शून्यवाद एवं अपोहवान ।	50	
	(ख) वाचस्पति कृत भामती का सर्वास्तिवाद, विज्ञानवाद,	50	

चतुर्थ पत्र			100
	(क) स्वायम्पयक निबन्ध	35	
	(ख) बौद्ध दर्शन का आलोचनात्मक इतिहास ।	35	

सहायक पुस्तकें—

- (1) बौद्ध दर्शन आ० बल देव उपाध्याय
- (2) बौद्ध दर्शन मीमांसा : आ० बलदेव उपाध्याय
- (3) बौद्ध दर्शन और वेदान्त : सी० डी० शर्मा ।
- (4) अर्ली मानिस्टिक बुद्धिज्म : नलिनाक्ष दत्त ।
- (5) दी डाक्ट्रीन्स आफ बुद्ध : जार्ज ग्रिम ।
- (6) बुद्धिष्टिक फिलासफी इन इंडियन एन्डसीलोन क्रीय ।
- (7) दी बुद्धिष्टिक डोक्ट्रीन आफ यूनिवर्सल फलक्स : मुकर्जी ।
- (8) सेंट्रल कान्सेप्शन आफ बुद्धिज्म : स्पर्गरवात्स्की ।
- (9) कान्सेप्शन आफ बुद्धिष्टिक निर्वाण : स्पर्गरवात्स्की ।
- (ग) पाश्चात्य दर्शन का सामान्य अध्ययन 30

टिप्पणी—इस पत्र (ग) के अंश की सहायक पुस्तकें  
सामान्य दर्शन के चतुर्थ पत्र के पाठ्य-क्रम में  
दी गई ।

## अथवा

चतुर्थ पत्र - लघु प्रबन्ध 100

या (11, पौरीहित्य (प्रायोगिक सहित)

## ग्रन्थ

पत्र संख्या पूर्णकि

प्रथम पत्र — अनिवार्य 100

## द्वितीय पत्र

(क) विष्णुयाग पद्धति— 35

(ख) अग्निहोत्र पद्धति— 25

(ग) प्रायोगिक परीक्षा (क) व (ख) पर  
आधारित 40

## तृतीय पत्र—

(क) कात्यायन श्रौत सूत्र—दर्शपूर्णमासान्त— 75

(ख) बृहज्जातक—1 से 13 अध्याय— 25

## चतुर्थ पत्र—

(क) स्वविषयक निबन्ध 25

(ख) कर्मकाण्डका इतिहास— 25

(ग) प्रायोगिक परीक्षा (अनुष्ठान प्रकाश)  
गायत्री पुरश्चरण पद्धति तथा शतचण्डी  
प्रयोग पर आधारित— 50

## अथवा

लघु प्रबन्ध— 100

या (12) धर्म शास्त्र

पत्र संख्या ग्रन्थ पूर्णकि 100

प्रथम पत्र अनिवार्य 100

## द्वितीय पत्र

(क) द्वैतनिर्णय—नरहरिकृत 50

(ख) प्रायश्चित्तविवेक—शूलपाणिकृत— 50

तृतीय पत्र

(क) व्यवहारमयूख	25
(ख) श्रद्धाविवेक—रुद्रदेव—	25
(ग) विवादरत्नाकर—	25
(घ) पुरुषार्थचिन्तामणि—	25

चतुर्थ पत्र—

(क) स्वविषयक निबन्ध—	35
(ख) धर्मशास्त्र का आलोचनात्मक इतिहास—	35
(ग)	30

सहायक पुस्तकें—

- (1) हिस्ट्री आफ धर्मशास्त्र—पी० वी० कारण
- (2) मानव धर्म शास्त्र—डा० भगवान दास
- (3) धर्म विज्ञान—स्वामी दयानन्द  
(भारत धर्म महामण्डल, काशी)
- (4) आर्य विद्वानम्—विश्वेश्वरनाथ रेऊ
- (ग) यहूदी, ईसाई, इस्लाम तथा जरथ्रुस्त्रवाद का सामान्य ज्ञान,

सहायक पुस्तकें—

- (1) विश्व धर्म दर्शन—सांवलिया विहारी
- (2) दी अली मिसेन्स आफ क्रिस्टेनिटी—ई० न्यू०
- (3) टेक्व अपोष्टिल्स—ई—रिन्यू
- (4) तसब्बुफ (सूफीमत) —चन्द्रावली पाण्डेय
- (5) दी रिलीजन आफ इस्लाम—मौहम्मद अली
- (6) रिलिजियस लाइफ एन्ड एटीट्यूट आफ इस्लाम—डी० वी०  
मैकडानल्ड
- (7) टीचिंग आफ इस्लाम
- (8) दी रिलीजन आफ जरथ्र—तारापोरवाला

या (13) पुराणे इतिहास

प्रथम पत्र

अनिवार्य

100

द्वितीय पत्र—

- (क) देवी भागव

50

(ख) ब्रह्म वैवर्तीपुराण	50
अथवा	
वायुपुराण	100
अथवा	
हरिवंश पुराण	100
अथवा	
(क) शिवपुराण (पूर्व भाग)	50
(ख) राजतरंगिणी (उत्तरार्द्ध)	50
तृतीय पत्र	
(क) भक्तिरत्नावली ।	
(ख) शण्डिल्यसूत्र (नारायणतीर्थ टीका सहित)	
(ग) पु-राणोत्पत्ति प्रसंग—	30
चतुर्थ पत्र—	
(क) स्वविषयक निबन्ध—	35
(ख) पुराणों का आलोचनात्मक इतिहास	35
सहायक पुस्तकें—	
(1) विश्व इतिहास की रूपरेखा-एल०एन० गुप्ता	
(2) विश्व का इतिहास-माधुर एवं शर्मा	
(3) विश्व इतिहास राम प्रसाद त्रिपाठी	
(4) वर्ल्ड हिस्ट्री-डेविज़	
(ग) पुराण पारिजात—म०म० गिरिधर शर्मा	30
चतुर्वेदी	
अथवा	
लघु प्रबन्ध	100
या (14) आगम	
प्रथम पत्र	अनिवार्य
	100
द्वितीय पत्र	
(क) तन्त्रालोक (अभिनवगुप्त 1-2 पटल	
(ख) शारदा तिलकन् (1 से 3 पटल तक)	50

तृतीय पत्र—

(क) आगमरहस्य (1 से 10 पटल तक)	50 )
सरयू प्रसाद द्विवेदी	)
(ख) कामकला विलास—	50 )

चतुर्थ पत्र—

(क) स्वशास्त्रीय निबन्ध ।	35
(ख) स्वशास्त्रीय इतिहास ।	35
स्वशास्त्रीय पूजापरिज्ञानम् ।	30

अथवा

लघु प्रबन्ध	100
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- या (15) वास्तु तथा जिल्प ) इन विषयों की पाठ्यपुस्तकें  
 या (16) पाली तथा प्राकृत ) तथा पाठ्यक्रम बाद में घोषित किया  
 जायगा ।

टिप्पणी—वैकल्पिक विशिष्ट विषय के अन्तर्गत वैद, ज्योतिष तथा पौरोहित्य विषय के पाठ्यक्रम में तद् तद् विषय की प्रायोगिक परीक्षा भी होगी । ऐसे स्थलों पर सैद्धान्तिक परीक्षा तथा प्रायोगिक परीक्षा में पृथक् पृथक् न्यूनतम उत्तरणांक प्राप्त करना आवश्यक होगा । प्रायोगिक परीक्षा विश्वविद्यालय से नियुक्त परीक्षक द्वारा निर्दिष्ट परीक्षा केन्द्र पर निर्दिष्ट समय पर ली जायगी । इस परीक्षा का समय सैद्धान्तिक के अतिरिक्त रहेगा । इसके अंक सम्बन्धित पत्र के अंक साथ सम्मिलित कर दिये जायेंगे ।

सूचना—शास्त्री तथा आचार्य परीक्षाओं की पाठ्य पुस्तकें निम्नलिखित स्थानों से प्राप्त की जा सकती हैं :....

- (1) चोखम्बा संस्कृत सीरिज, पो० वा० नं० 8, वाराणसी—1,
- (2) मोतीलाल बनारसीदास, नेपाली खपरा, वाराणसी
- (3) मास्टर खैलादी लाल एन्ड सन्स, वाराणसी,
- (4) नेतराम लक्ष्मण दास



संस्कृत अध्ययन मंडल की बैठक दिनांक 5 फरवरी, 1971  
के निश्चय संख्या 4 द्वारा गठित उपसमिति की बैठक  
दिनांक 17 व 18 मार्च, 1971 का कार्य विवरण

### उपस्थित

डा० पी० एल० भार्गव (अध्यक्ष)

श्री दुर्गादत्त शर्मा

श्री गंगाधर द्विवेदी

श्री गोविन्द नारायण शर्मा (विशेष आमंत्रित)

श्री छोटे लाल मिश्र (विशेष आमंत्रित)

श्री मोती लाल जोशी (संयोजक)

बोर्ड द्वारा स्वीकृत शास्त्री परीक्षा की त्रिवर्षीय योजना तथा आचार्य परीक्षा योजना के अनुसार पाठ्यक्रम बनाने पर विचार संस्तुति की जो परिशिष्ट क, ख, ग और घ में दी गई हैं।

ह० पी० एल० भार्गव

अध्यक्ष

ह० मोती लाल जोशी

संयोजक

## संस्कृत संकाय

त्रिवर्षीय शास्त्री—पाठ्यक्रम की प्रथम वर्ष परीक्षा, 1972

का पाठ्यक्रम तथा पाठ्यपुस्तकें

वर्ग (1) अनिवार्य विषय

1 : सामान्य संस्कृत

एक प्रश्न पत्र 100 अंकों का होगा तथा समय 3 घंटे का होगा और यह अनिवार्य रहेगा ।

सामान्य संस्कृत प्रथमपत्र

(क) व्याकरण—संधि बडलिग एवं गण का ज्ञान

30 अंक

(ख) अनुवाद— हिन्दी से संस्कृत एवं इन प्रकरणों के आधारअशुद्धि संशोधन

(ग) काव्य रघुवंश (13 वां सर्गमात्र)

(घ) नाटक अभिज्ञान शाकुन्तल

सहायक पुस्तकें—

आप्टेबाइड

प्रोढ रचनानुवाद कीमुदी कपिल देव द्विवेदी

2 : सामान्य अंग्रेजी General English

There shall be one paper of three hours duration carrying 100 marks.

The paper is divided as follows:—

(a) Comprehension and vocabulary

40+10 marks

(b) Composition (Paragraph writing Precies writing, letter writing)

25

(c) Language and usage (Articles, Tenses, Director & Indirect Speech Prepositions, Active & Passive voice, Model Auxiliaries Punctuation, Basic Sentences Patterns.

25

The main objective of teaching English is to enable the student to develop the skill of reading comprehension. Two subsidiary aims are :

1. Promoting the ability to express in writing simple ideas and information with clarity and in correct English.
2. Indirectly helping the students to understand talks and lectures in easy English.

*Books prescribed :*

( i ) For language & usage :

English for India by R. P. Bhatnagar, Jain Pustak Mandir, Jaipur.

(ii ) For Comprehension and vocabulary :

A journey to the Centre of the Earth by Jules verne  
(Longmen's Simplified stores)

or

Doctor in the House by Richard Gordon (Longmen's Simplified series.)

*Note :* Question on comprehension will not be content based, They will merely test the students intensive reading skill through direct and multiple choice questions.

वर्ग (2) वैकल्पिक मुख्य विषय

निम्नांकित में से कोई एक विषय ग्राह्य है:—

प्रत्येक पत्र का समय 3 घंटा रहेगा ।

या तो (1) ऋग्वेद (प्रायोगिक सहित)

पत्रसंख्या	ग्रन्थ	पूर्णांक 100
प्रथम पत्र		
(क)	ऋग्वेद मंत्र संहिता (सस्वर) के 10 सूक्त	35 अंक
(ख)	कुण्ड मण्डम सिद्धि	30 अंक
(ग)	पाणिनीय शिक्षा	35 अंक

द्वितीय पत्र

(क) ग्रह शान्ति	}	ब्रह्म कर्म समुच्यानुसार 60 अंक
(ख) विवाहोपनयन पद्धति		
(ग) प्रायोगिक परीक्षा द्वितीय पत्र के (क) और (ख) भाग की		40 अंक

या (1) यजुर्वेद (प्रायोगिक सहित)

प्रथम पत्र

	पूर्णांक 100
(क) याज्ञवल्क्य शिक्षा	35 अंक
(ख) दण्डक मंत्र संहिता सस्वर	35 अंक
(ग) कुण्डमण्डप सिद्धि	30 अंक

द्वितीय पत्र

(क) ग्रह शान्ति (ग्रमयाग पद्धति)	60 अंक
विवाहोपनयन पद्धति हरिहरभाष्य नुसारी	
(ख) प्रायोगिक परीक्षा द्वितीय पत्र के (क) भाग के हरिहर पद्धति के अनुसार	40 अंक

या सामवेद (प्रायोगिक सहित)

पत्र संख्या	ग्रन्थ	पूर्णांक 100
प्रथम पत्र		

(क) सामवेद संहिता पूर्वाधिक 4 प्रपाठक सस्वर	35 अंक
(ख) नारदीय शिक्षा	35 अंक
(ग) कुण्डमण्डप सिद्धि	30 अंक

द्वितीय पत्र

(क) सामवेदन ग्रह शान्ति	60 अंक
विवाहोपनयन पद्धति गोविन्द ग्रहय प्रकाशिकानुसारी	
(ख) प्रायोगिक परीक्षा द्वितीय पत्र के (क) भाग की	40 अंक

## या (1) अथर्ववेद (प्रायोगिक सहित)

पत्र संख्या ग्रन्थ पूर्णांक 100

## प्रथम पत्र

(क) अथर्ववेद सहिता पंचमकाण्ड सस्वर	35 अंक
(ख) कुण्ड मण्डप सिद्धि	30 अंक
(ग) माण्डूकीय शिक्षा	35 अंक

## द्वितीय पत्र

पूर्णांक 100

(क) अथर्ववेदीय ग्रह शान्ति विवाहोपनयन पद्धति}	60 अंक
(ख) प्रायोगिक परीक्षा द्वितीय पत्र के (क) भाग की	40 अंक

## या (2) व्याकरण

पत्र संख्या ग्रन्थ पूर्णांक 100

## प्रथम पत्र

सिद्धान्त कौमुदी

(स्त्रीप्रत्यय प्रकरण से समासाश्रय विधि प्रकरण तक)

## द्वितीय पत्र

सिद्धान्त कौमुदी

(तद्धिताविकार प्रकरण से वित्त प्रकरण तक) 100 अंक

## या (3) साहित्य

## प्रथम पत्र

पूर्णांक 100

(1) रघुवंश 4, 5, 6	40 अंक
(2) मेघदूत (पूर्वार्ध)	30 अंक
(3) रुक्मिणी हरण (1, 2 सर्ग)	30 अंक

## द्वितीय पत्र

पूर्णांक 100

(क) चन्द्रालोक 1 से 6 मयूखान्त	40 अंक
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- (ख) वृत्तरत्नाकर (प्रथमाध्याय, एवं निम्नलिखित  
छन्द—हरिणीप्लुता, रथाश्वता, मंजुमा-  
पिणी शालिनी, मालती, दण्डक, चन्द्रलेखा,  
वैतालीय और औपच्छासिक 30 अंक
- (ग) काव्यालंकार सूत्र (केवल पंचमाधिकरण) 30 अंक

### सामान्य दर्शन

#### प्रथम पत्र

पूर्णांक 100

- (1) मुक्तावली (अनुमान खण्डान्त) 100 अंक

#### द्वितीय पत्र

- (1) तन्त्रसिद्धान्तावली (म.म. चिन्नस्वामी) 100 अंक

### या (5) वेदान्त

#### पत्र संख्या

#### ग्रन्थ

पूर्णांक 100

#### प्रथम पत्र

- (क) पंचदशी-तृप्तिदीपान्त 50 अंक
- (ख) वेदान्त परिभाषा-वर्मराजा व्वरिक  
द्वारा लिखित 50 अंक

#### द्वितीय पत्र

पूर्णांक 100

- (क) ईशावास्योपनिषद् शांकर भाष्य सहित 50 अंक
- (ख) कठोपनिषद् शांकर भाष्य सहित 50 अंक

### या (6) मीमांसा

#### पत्र संख्या

#### ग्रन्थ

पूर्णांक 100

#### प्रथम पत्र

- (क) अधिकरण-न्यामाला 1, 2 व 3 अध्याय 60 अंक
- (ख) मीमांसा कुतूहल वृत्ति 1, 2 अध्याय 40 अंक

### या (7) न्याय

#### पत्र संख्या

#### ग्रन्थ

पूर्णांक 100

#### प्रथम पत्र

- (1) न्याय सिद्धान्त मुक्तावलि 100 अंक

## द्वितीय पत्र

(1) माथुरी पंचलक्षणी

100 अंक

या (8) ज्योतिष

पत्र संख्या

ग्रन्थ

पूर्णांक 100

## प्रथमपत्र

(क) वीज गणित—एक वर्ष मध्यमाहरणान्त  
(वर्ग प्रकृति चक्रवाला 1 रहित)

50 अंक

(ख) रेखा गणित का द्वितीयाध्याय

25 अंक

(ग) जातकालंकार (योगाध्याय)

25 अंक

## द्वितीय पत्र

पूर्णांक 100

(क) ग्रहलाघव (सूर्यग्रहणावि कारान्त)

30 अंक

(ख) रेखागणित 3, अध्याय

10 अंक

(ग) ताजिकनीलकण्ठी (संज्ञातन्त्र)  
(सहमाध्यायरहित)

20 अंक

## प्रायोगिक

मुहूर्तज्ञान, वर्ष एवं जन्मपत्र निर्माण का ज्ञान,

वर्षफल निरूपण एवं जन्मपत्र के फलित का साधारण  
निरूपण। 40 अंक

या (9) धर्मशास्त्र

पत्र संख्या

ग्रन्थ

पूर्णांक 100

## प्रथम पत्र

(क) शुद्धिविवेक सम्पूर्ण (रुद्रधर कृत)

40 अंक

(ख) श्राद्धविवेक, रुद्रधर कृत 1/2 परिच्छेद

40 अंक

(ग) दत्तक चन्द्रिमा कुवेरकृत

20 अंक

## द्वितीय पत्र

(क) धर्म सिन्धु—काशीनाथोपाध्याय कृत 1, 2  
परिच्छेद

50 अंक

(ख) अर्थसंग्रह—लौकाशिकृत

50 अंक

या (10) जैन दर्शन

पत्र संख्या	ग्रन्थ	पूर्णांक 100
प्रथम पत्र		

(क) न्याय दीपिका

100 अंक

द्वितीय पत्र

(क) सर्वार्थसिद्धि (संक्षिप्त संस्करण  
पं०चैनसुखदास कृत)

100 अंक

या (11) बौद्ध दर्शन

पत्र संख्या	ग्रन्थ	पूर्णांक 100
प्रथम पत्र		

(क) मिलिन्दपन्हो विमतिच्छेदनान्त

50 अंक

(ख) अभिवम्मत्यसंगहो वा०स०वि०वि०  
प्रकाशित

50 अंक

सहायक पुस्तकें—

1. अभिवम्मफिलासफी-मिधुजदी काश्यपकृत
2. फिलासफी एण्ड साइकालाजी आफ अभिवर्म एच०वी० गुन्यर
3. थेरवाद बुद्धिज्म इन वर्मा-एन० आर० राय
4. बुद्धिस्ट साइकालाजी रीज डेविड्स
5. अभिवर्मार्थ संग्रह-वीरेन्द्रलाल मत्सूदी

द्वितीय पत्र— पूर्णांक 100

- (क) अभिवर्म कोश के 1 से 4 कोशस्थान-वसुवन्धुरचित्त 50 अंक
- (ख) अभिवर्मकोश स्कुटार्थ के 1 से 4 कोशस्थान  
यशोमित्रकृत 50 अंक

सहायक ग्रन्थ—

1. सुवर्वास्तिवाद लिद्रेचर-ए० सी० वनर्जी
2. मैन्युअल आफ बुद्धिस्ट फिलासफी-मैकगवर्न
3. वैभाषिक दर्शन-अनन्तकुमार भट्टाचार्य
4. बौद्धधर्मदर्शन (13, 15, 16 आचार्य नरेन्द्र देव कृत)
5. सैन्ट्रल कन्सेप्शन आफ बुद्धिज्म-इचेन्वातकी



## या (12) पौरोहित्य (प्रायोगिक सहित)

पत्र संख्या	ग्रन्थ	पूर्णांक 100
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प्रथम पत्र—

मुहूर्त चिन्तामणि-विवाह प्रकरणात्	100 अंक
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द्वितीय पत्र—

(क) दशकर्म पद्धति	20	)	
( ) एको दृष्टि पार्वण आठ पद्धति	10	)	
ग्रह शांति	20	)	60 अंक
पूजापंक्त नान्कर	10	)	
(ख) प्रायोगिक परीक्षा द्वितीय पत्र के (क)			40 अंक

## या 13 पुरातत्त्विक

पत्र संख्या	ग्रन्थ	पूर्णांक 100
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प्रथम पत्र

(क) श्री मन्मागवत 1, 2 स्कन्ध	60 अंक
(ख) सविस्तरमायन प्रथमोऽल्लस सनाथ	40 अंक

द्वितीय पत्र

(क) श्रीमन्मागवत-तृतीय स्कन्ध	60 अंक
(ख) ईश-कैव-कठोपनिषद्	40 अंक

## या (14) आगम

पत्र संख्या	ग्रन्थ	पूर्णांक 100
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पत्र संख्या

(क) पद्मविंशतस्क सन्देश	20 अंक
(ख) प्रत्यनिशद्वयन केसरज हृतन	40 अंक
(ग) तन्त्रसार-अग्निनन्द गुप्त हृत	40 अंक

द्वितीय पत्र

(क) परमार्थसार अग्निनन्द गुप्त	50 अंक
(ख) शारदातिलकम् 1 पटल तक	50 अंक

दिप्पणी—

वैकल्पिक मुख्य विषय के अन्तर्गत भेद । ज्योतिष । परोहित्य के द्वितीय पत्र के पाठ्यक्रम में तद् विषय की प्रायोगिक परीक्षा होगी । वह उस पत्र का भाग होगी । ऐसे स्थलों पर सैद्धान्तिक परीक्षा तथा प्रायोगिक परीक्षा में पृथक् पृथक् न्यूनतम उत्तीर्णांक प्राप्त करना आवश्यक होगा । प्रायोगिक परीक्षा विश्वविद्यालय से नियुक्त परीक्षक द्वारा निर्दिष्ट परीक्षा केन्द्र पर निर्दिष्ट समय पर ली जायेगी । इस परीक्षा का समय सैद्धान्तिक के अतिरिक्त रहेगा । इसके अंक सम्बन्धित पत्र के अंकों के साथ सम्मिलित कर दिये जायेंगे ।

### वर्ग (3) वैकल्पिक विषय

निम्नांकित में से कोई दो विषय ग्राह्य है, किन्तु क्र० सं० 12 व 13 में से छात्र कोई एक विषय ही ले सकेगा ।

#### 1. हिन्दी साहित्य

3 घण्टे की अवधि का एक प्रश्न पत्र होगा, जिसमें 100 पूर्णांक होंगे—

हिन्दी साहित्य पूरक पाठ्य पुस्तकों पर प्रश्न तथा संस्कृत से हिन्दी में अनुवाद व निबन्ध

इस पत्र में अंक विभाजन निम्न प्रकार होगा—

1. प्रश्न (प्रत्येक पुस्तक पर 20 अंक)	60 अंक
2. अनुवाद	10 अंक
3. निबन्ध	30 अंक

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योग 100 अंक

### पूरक पाठ्य पुस्तकें

1. समीक्षापथ प्रदर्शन संग्रह-चन्द्र शेखर शर्मा (राजस्थान पुस्तक सदन, जयपुर) ।
2. स्मृति की रेखायें-महादेवी वर्मा (भारती भण्डार लीडर प्रेस इलाहाबाद) ।
3. आर्य मार्ग और अन्य एंकाकी-शम्भूलाल सक्सेना (रमेश बुक डिपो, जयपुर) ।

निबन्ध आदि के लिये अन्य पुस्तकें—

1. साहित्य दिग्दर्शन-श्री मती स्वर्णलता अग्रवाल (श्री कृष्णा ब्रदर्स, अजमेर)
2. आधुनिक निबन्ध और हिन्दी रचना-रमेश चन्द्र शास्त्री (रायल बुक एजेन्सी, अजमेर)
3. निबन्ध निकेत-मोतीलाल गुप्त (स्टुडेन्ट्स बुक कम्पनी, जयपुर) ।

## (2) अंग्रेजी साहित्य

इस विषय में 100 पूरांक का 3 घन्टे का एक प्रश्न पत्र होगा ।  
अंकों का विभाजन निम्न प्रकार होगा—

(अ) शेक्सपियर एण्ड ड्रामा	30 अंक
(ब) गद्य	30 अंक
(स) पद्य	40 अंक

## (अभिस्तावित पुस्तकें (विशेष अध्ययनार्थ)

1. मरचेन्ट आफ वैनिस शेक्सपियर
2. दी गाइड आर० के० नारायण
3. फौफटीन पोइट्स (ग्र० यू० प्रेस) में से निम्न कवियों की उनके नामों के सम्मुख अंकित कविताएँ—
  1. ओरनोल्ड — डोवर बीच, और मेमोरियल वसंजे
  2. कपूर — दी कास्ट अवे और अलेक्जेंडर सेलविक
  3. ब्राउनिंग — दी लास्ट राहूड टूगेदर
  4. कोलरिज — फ्रा स्ट एट मिड वाइड और यूथ एण्ड ऐज
  5. वॉयरन — रोल ओन दी अ डीन एण्ड डार्क व्ल्यू  
आंसत एण्ड डेडिकेशन टू दी पोयट लोरेड
  6. टैनीसन — इन मैमोरियम

## (इ) एक विदेशी भाषा

### जर्मन

एक प्रश्न पत्र 100 अंकों का होगा तथा समय 3 घन्टे का होगा-पत्र में अंक विभाजन निम्न प्रकार होगा—

(अ) जर्मन से संस्कृत या हिन्दी या अंग्रेजी में अनुवाद	25 अंक
(ब) व्याकरण (वाक्यों की पूर्ति)	25 अंक
(स) श्रुतलेख (आवा घण्टा)	25 अंक
(द) मौखिक	25 अंक

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योग 100 अंक

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### अभिस्तावित पुस्तकें—

Schuty-Griesbach : Lesson-15

Deutsche Spra Chlebre Four Auslaudar (Minich 1964)  
Chapters—1-16)

### या फ्रेन्च

एक प्रश्न पत्र 100 अंकों का तथा समय 3 घण्टे का होगा-पत्र में अंक विभाजन निम्न प्रकार होगा—

(अ) फ्रेन्च से संस्कृत या हिन्दी या अंग्रेजी में अनुवाद (निर्धारित पाठ्यपुस्तक से)	25 अंक
(ब) संस्कृत या हिन्दी या अंग्रेजी से फ्रेन्च में अनुवाद	25 अंक
(स) व्याकरण	25 अंक
श्रुतलेख 'आवा घण्टा)	25 अंक

### पाठ्य ग्रन्थ—

Masourin Dounds : Modern French Course  
1 to 25 lessons)

### या रसियन

एक प्रश्न पत्र 100 अंकों तथा समय 3 घण्टे का होगा । पत्र में अंक विभाजन निम्न प्रकार रहेगा—

(अ) रसियन से संस्कृत या हिन्दी या अंग्रेजी में अनुवाद	30 अंक
(ब) संस्कृत या हिन्दी या अंग्रेजी से रसियन में अनुवाद	15 अंक
(स) व्याकरण	25 अंक

(द) श्रुतलेख	10 अंक
(ज) मौखिक	20 अंक
	<hr/>
योग	100 अंक
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निर्धारित पुस्तकें

### या परसियन

एक प्रश्न पत्र 100 अंकों का तथा समय तीन घण्टे का होगा। पत्र में अंक विभाजन निम्न प्रकार रहेगा—

गद्य अनुवाद	30 अंक
गद्य लेखक परिचय	10 अंक
पद्य व्याख्या	30 अंक
कवि परिचय	10 अंक
द्रुत पठन	10 अंक
अलंकार शास्त्र	10 अंक
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योग	100 अंक
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निर्धारित पुस्तकें (गद्य तथा पद्य)

Nisabe, Fassi edited by Dr. Umme Hani

(Published by the Deptt. of Persian, M. U. Aligarh  
Rs. 4.00)

The following portions only are prescribed :

1. Intekhab az chahr Miqala.
2. Intekhab az kitab awwal akabir
3. Insmal O Hikam
4. Ghazalyat : Khusso and Hatiz
5. Ashaar : Bahar Mashhadi and Parvin Ekte shami.

द्रुत पाठ्य—

Sukhane Nav Part II by Dr. Gulam Sarwar (Published

by Educational Book House, Civil Lins, Aligarh-2 Price Rs. 1.50)

The following portions are prescribed :

1. Florence Nightingale
2. Reza shah Pehlavi
3. Sukhane Nau by Dr. Gulab Sarwar

अलंकार शास्त्र

Radeef Qafiya, Tashbeeh, Isteara, Tazad,  
Mubalegha, Laffo Nas hr Murtatab, Gher  
Murtatab, Talmeeh, Husne Tabel.

(4) इतिहास

इस विषय का एक प्रश्न पत्र 100 अंकों का होगा । जिसका समय 3 घण्टे का होगा । निम्न लिखित में से एक प्रश्न पत्र लेना होगा—

प्रथम पत्र—

1. प्राचीन भारतीय इतिहास एवं विभार (ईसा से 600 वर्ष में 1200 ई० उपरान्त तक)

अथवा

2. मध्यकालीन भारतीय इतिहास एवं संस्थायें--संस्कृति (1200 ई० से 1740 ई० तक)

अथवा

3. आधुनिक भारत का इतिहास (1740 ई० 1950 ई० से तक)

पाठ्य ग्रन्थ—

पत्र-1

1. त्रिपाठी आर० एस०-प्राचीन भारत का इतिहास
2. भार्गव पी० एल०-प्राचीन भारत का इतिहास
3. पाण्डे आर० बी० प्राचीन भारत

पत्र-2

1. श्री वास्तव-एल० एल०-दिल्ली सलग्न
2. ईश्वरी प्रसाद-मुस्लिम शासन का संक्षिप्त इतिहास

3. पाण्डे-ए० बी०-मध्यकालीन भारत
4. त्रिपाठी-आर० पी० मुस्लिम शासन का उत्थान व पतन

पत्र-3

1. ईश्वरी प्रसाद व सुवेदार-आधुनिक भारत का इतिहास (1940-1950)
2. सरकार व दन्त-आधुनिक भारत का इतिहास भाग 2

### 5 राजनीति विज्ञान

इस विषय में 3 घण्टे की अवधि का 100 पूर्णांक का एक प्रश्न पत्र होगा—

### प्रश्न-पत्र नीति के मूल सिद्धान्त

1. विषय-परिभाषा, क्षेत्र, अध्ययन विधि, एवं अन्य सामाजिक शास्त्रों से सम्बन्ध ।
3. राज्य की परिभाषा, उत्पत्ति एवं प्रकृति
3. सरकार की परिभाषा तथा प्रकार
4. संविधान की परिभाषा तथा दण्ड ।
5. सर्वोच्च सत्ता के लक्षण एवं प्रकार कानून तथा दण्ड ।
6. स्वतन्त्रता, समानता, अधिकार ।
7. राज्य के लक्ष्य व ध्येय के सिद्धान्त ।  
व्यक्तिवाद, समाजवाद, आदर्शवाद, साम्यवाद, अराजकतावाद ।
8. लोक कल्याणकारी राज्य ।
9. राष्ट्रवाद, अन्तराष्ट्रवाद तथा संयुक्त राष्ट्र संघ ।

पाठ्य ग्रन्थ—

1. लास्की-ग्रामर आफ पालिटिक्स (हिन्दी अनुवाद)
2. आशीर्वादम्-राज शास्त्र के सिद्धान्त ।
3. अपठुराय-राजनीति के मूलतत्त्व ।
4. गार्नर-राजनीति शास्त्र व सरकार
5. गणेश प्रसाद-राजनीतिक विचार धारार्थे ।
6. जै० पी० सूद-राजनीति के मूल तत्त्व ।
7. परमात्माशरण-राज्य शास्त्र के सिद्धान्त ।
8. विसारिया-राज्य शास्त्र के सिद्धान्त ।

## (6) अर्थ शास्त्र

एक प्रश्न पत्र 100 अंकों का होगा जिसका समय 3 घण्टे होगा ।

## प्रश्न पत्र-भारतीय अर्थ व्यवस्था

(अ) स्वतन्त्रता पूर्व भारतीय अर्थ व्यवस्था की प्रमुख गतिविधियाँ—

उन्नीसवीं शताब्दी से पूर्व भारत की आर्थिक दशा, ब्रिटिश काल में प्रारम्भ की गई नवीन भू भवारण प्रणालियाँ (1793-1850) भू धारण प्राणालियों के परिणाम, भू करों का भार, भारतीय परम्परागत उद्योगों का पतन, रेल निर्माण एवं इनके आर्थिक परिणाम, भारत से सम्पत्ति का बाहर की ओर प्रवाह स्वतन्त्रता प्राप्ति से पूर्व भारत में आर्थिक गतिहीनता व पिछड़े पन के कारण ।

(ब) स्वतन्त्रता उपरान्त भारत की अर्थ व्यवस्था—

## 1. भौगोलिक एवं मानवीय साधन

भौगोलिक साधन—

भौगोलिक वातावरण एवं प्राकृतिक साधन महत्व, भारती की स्थिति तथा विस्तार, सीमायें, प्राकृतिक भाग, जलवायु मिट्टी एवं जल साधन ।

वन सम्पत्ति वन नीति एवं योजनाओं में वनों की प्रगति, प्रमुख खनिज एवं शक्ति के साधन-कोयला, खनिज तेल व जल विद्युत (राजस्थान के खनिजों का यथेष्ट ज्ञान), जल शक्ति विकास-नदी घाटी योजनायें (राजस्थान की बहुउद्देशीय योजनाओं का वृहद ज्ञान) प्राकृतिक साधनों का मूल्यांकन ।

## (2) मानवीय साधन—

भारतीय जन संख्या की दृष्टि और जन संख्या की समस्या को स्वरूप वृत्त परिवार नियोजन, जन संख्या सम्बन्धी विवेक पूर्ण नीति ।

भारतीय कृषि—

भारतीय अर्थ व्यवस्था में कृषि का महत्व, विशेषतायें, भारत में भूमि का उपयोग, फसलों का प्रारूप या ढांचा व अकाल व बाकालों के कारण तथा खाद्यान्नों की पूर्ति, सिंचाई क्षेत्रों का आकार-उपविभाजन एवं अपखण्डन तथा प्रति टेक्टर उत्पादन की न्यूनता, भू धारण एवं सुधार पद्धतियाँ (राजस्थान के विशेष संदर्भ में) ग्रामिणश्रमण ग्राह्यता, कृषि पदार्थों की बिक्री में सहकारिता, का विकास नवीन कृषि नीति ।



### 3. भारतीय उद्योग—

भारत कुटीर एवं लघु उद्योग, सन् 1951 से बड़े पैमाने के उद्योग धान्धों के विकास की गति, औद्योगिक एवं वित्त के साधन, औद्योगिक श्रम श्रमिक संघ आन्दोलन का विकास, श्रम कल्याण एवं सामाजिक सुरक्षा, औद्योगिक विकास की समस्याएँ, शहरों में सहकारिता का विकास ।

### 4. भारतीय व्यापार एवं परिह्वन—

आधुनिक रेल, सड़क, वायु तथा जल-यातायात के विकास के महत्वपूर्ण तथ्य, भारत के विदेशी व्यापार की प्रमुख आयात तथा निर्यात ।

### 5. राजस्थान का आर्थिक विकास —

भौगोलिक परिचय, जन संख्या, कृषिगत ढांचा. औद्योगिक प्रगति विकास की दरें, आर्थिक नियोजन, योजनाओं की विशेषताएँ, उत्पदन एवं विकास के क्षेत्र में प्रमुख उपलब्धियाँ, योजनाओं की वित्तीय व्यवस्था, राज्य की आय एवं व्यय के साधन ।

#### पाठ्य ग्रन्थ

- (1) Alak Ghosh : Indian Economy its Nature and problems.

3. देराश्री एवं नाथूराम का-भारतीय अर्थ शास्त्र प्रकाशक-लक्ष्मी-नारायण अग्रवाल, अस्पताल मार्ग-आगरा-3

#### सहायक ग्रन्थ

1. ड्यूबेट-केवल कृष्ण-भारतीय अर्थ शास्त्र-प्रकाशक प्रीमियर पब्लिशिंग कम्पनी, फत्वाड़ा, दिल्ली ।
2. जयार एण्ड जयार-भारतीय अर्थ शास्त्र-दो भागों में (हिन्दी व अंग्रेजी में) ।

#### संदर्भ पत्र पत्रिकाएँ—

1. Indian Economic-Journal
2. Economic Times of India
3. Reserve Bank of India Bulletin.
4. राजनैतिक एवं आर्थिक समीक्षा

5. आर्थिक समीक्षा
9. योजना

### (7) सांख्यिकी

इस विषय में तीन घंटे की अवधि का 100 पूर्णाङ्क का एक प्रश्न पत्र होगा—

वर्णनात्मक सांख्यिकी के तत्व और संभावना सिद्धान्त

(*Elements of descriptive Statistics and probability Theory*)

सांख्यिकी की परिभाषा, इतिहास व क्षेत्र । सांख्यिकीय जन संख्या का सिद्धान्त प्रदत्त आंकड़ों का संकलन, विभागीकरण व सांख्यिकीयन का (टैबुलेशन) विभिन्न विधियां । आंकड़ों के लेखाचित्रात्मक और रेखाचित्रात्मक प्रस्तुतीकरण का विस्तृत क्रम वार । स्थापन व विस्तार के माप, चल गुणांक । कुटौतिसि और स्क्वेरसि की आवश्यकता तथा माप शेपर्ड करेक्शन प्रमाण रहित ।

संभावना—

वृद्धि व गुणीय प्रमेय, रेण्डम वेरियेबल्स, मेथेमेटिकल-एक्सपेक्टेडन दी वीयोमिनल पोयजन एण्ड नोर्मल डिस्ट्रिब्यूशन और उनके उपयोग ।

अभिस्तुति पुस्तकें—

1. आर० आर० उमागजी-प्रोबेबिलिटी एण्ड स्टेटिस्टिकल मेथड ।
2. गून व अन्य-फण्डामेण्टल्स आफ स्टेटिस्टिक्स ।
3. डी० एन० एलहेन्स-फण्डामेण्टल्स आफ स्टेटिस्टिक्स ।

संदर्भ ग्रन्थ —

1. घोष एम० के और चौवरी एन० सी०—स्टेटिस्टिक्स थ्योरी एण्ड प्रैक्टिस ।
2. वेलिस डब्ल्यू ए० और रोबर्ट्स एच० वी०—स्टेटिस्टिक्स न्यू अप्रोच ।

### (8) लोक प्रशासन

इस विषय में एक पत्र 3 घंटे की अवधि तथा 100 पूर्णांक का होगा—

### प्रश्नपत्र-केन्द्रीय प्रशासन-सिद्धान्त तथा प्रयोग

1. लोक प्रशासन का तात्पर्य तथा क्षेत्र, सरकार के प्रकार, संसदीय तथा राष्ट्रपति सम्बन्धी-सघात्मक एवं एकात्मक, लोक-तन्त्रात्मक कल्याणकारी राज्य का आशय भारत में लोक प्रशासन का एक पाठ्य विषय के रूप में विकास ।
2. संगठन—इसका आशय एवं क्षेत्र । संगठन का आवार । संगठन का कार्य ।
3. प्रमुख कार्यकारी पार्षद, प्रमुख व्यवस्थापक और निर्देशक ।
4. पूर्ण प्रशासनिक शाखा का संगठन ।
5. सामान्य प्रशासन के उपकरण ।
6. भारत सरकार के गृह एवं वित्त विभाग के प्रशासन का आन्तरिक संगठन ।
7. प्रशासनिक शक्तियाँ—नियंत्रित व अनियंत्रित ।
8. संयुक्त राष्ट्र संघ, सुरक्षा—परिषद व साधारण सभा की प्रशासनिक संरचना ।

— सचिवालयीय संगठन

— प्रमुख सचिव—कार्य व शक्तियाँ

— विशिष्ट अभिकरणों का संगठन व कार्य—  
यूनेस्को, एफ. ऐ० ओ० डब्ल्यू. एच० ओ ।

### अभिस्तावित पुस्तकें—

1. एम. पी. शर्मा—पब्लिक एडमिनिस्ट्रेशन इन थ्योरी एन्ड प्रैक्टिस
2. एम. पी. शर्मा—गवर्नमेन्ट आफ इन्डियन रिपब्लिक ।
3. भम्भारी—पब्लिक एडमिनिस्ट्रेशन ।
4. अवस्थी एन्ड माहेश्वरी—पब्लिक एडमिनिस्ट्रेशन ।

### संदर्भ ग्रन्थ—

1. व्हाइट—इन्ट्रोडक्शन टू दी स्टडी आफ पब्लिक एडमिनिस्ट्रेशन
2. विलाउगवार्ड—प्रिंसिपल आफ पब्लिक एडमिनिस्ट्रेशन  
(फार एण्ट्रीज 1-4 एवं 5 वां)
3. ग्लेडन—अर्गैन्जल्स आफ पब्लिक एडमिनिस्ट्रेशन
4. पोटर—इन्ट्रोडक्शन टू स्टडी आफ इन्टरनल आरगेनाइजेशन

### (9) मनोविज्ञान

पत्र संख्या

ग्रन्थ

पूर्णांक 100

#### 1. नवीन वाल मनोविज्ञान —

(रास विहारीराय शर्मा, प्रोफेसर हिन्दू विश्वविद्यालय)

### (10) समाज शास्त्र

पत्र संख्या

ग्रन्थ

पूर्णांक 100

भारतीय समाज शास्त्र

सहायक पुस्तकें —

1. कालीप्रसन्न दास गुप्त — हिन्दू समाज विज्ञान
2. भूदेवमुखोपाध्याय — सामाजिक प्रवन्ध ।
3. भूदेव मुखोपाध्याय — आचार प्रवन्ध ।
4. भूदेव मुखोपाध्याय — पारिवारिक प्रवन्ध ।
5. समाज शास्त्र — काशी विद्यापीठ ।

### (11) गृह विज्ञान

इस विषय में 3 घंटे की अवधि तथा 100 पूर्णांक का एक प्रश्न पत्र होगा—

शरीर विज्ञान तथा स्वास्थ्य रक्षा

- (अ) जीवित जन्तुओं के कोष्ठक, वनावट का अध्ययन ।
- (ब) अस्थिपंजर तथा मांस पेशियों का अध्ययन ।
- (स) भोजन तथा पाचन क्रिया ।

1. यकृत की वनावट तथा कार्य । प्लीहा तथा स्लोम ।
2. भोज्य पदार्थों का वर्गीकरण ।
3. आयु, जलवायु तथा उद्यम के अनुसार भोजन की आवश्यकता ।
4. दूध तथा संतुलित भोजन ।

स्वास्थ्य रक्षा :—

वैयक्तिक स्वास्थ्य रक्षा । हवा का आगमन । कूड़ा करकट तथा मूल का विसर्जन । जल तथा भोजन की व्यवस्था । इनके प्रति साधारण जनता का उत्तरदायित्व गन्दे स्थानों से स्वास्थ्य को भय । वाटिका खेल-कूद का मैदान, खुला स्थान, स्वास्थ्य जीवन के नियम ।

## समाज शास्त्र :—

मनुष्य की आवश्यकताओं तथा उनको पूर्ण करने में आनेवाली कठिनाइयों का अध्ययन ।

पारिवारिक जीवन से मनुष्य की आवश्यकताओं की पूर्ति ।  
 भारतीय परिवार तथा उसके सदस्यों के कर्तव्यों का अध्ययन ।  
 पारिवारिक बन्धनों का मनोवैज्ञानिक अध्ययन ।  
 बाल्यावस्था का मनुष्य के व्यक्तित्व के विकास पर प्रभाव ।  
 बाल्यावस्था यौन शिक्षा, बालक—बालिका सम्बन्ध ।

## शिशु रक्षण—

भावी माता तथा शिशु की देख भाल । शिशु का तौल, वच्चे को माँ के दूध से विमुख करना दाँत निकालना, वस्त्र पहिराना, मल मूत्र के त्याग करने की शिक्षा देना, पाचन क्रिया के रोग, शिशु मेरुण शिशु रक्षण ।

## भोजन पकाना —

तरकारी, आचार, मुरब्बा मीठा आचार शिकंजी, सास, फलों का मुरब्बा तथा दूध की मीठी वस्तुयें बनाना ।

## सिलाई—

सिलाई की मशीन के यन्त्रों का पूर्ण परिचय प्राप्त करना ।  
 प्रत्येक वर्ग के वस्त्र बनाना—

1. कुर्ती, ब्लाउज, सलवार ।
2. पजामा, कमीज, ब्रुशर्ट
3. फैसी वस्त्रों का एक सेट ।

## (12) फलित ज्योतिष

पत्र संख्या

ग्रन्थ

पूर्णांक 100

- |                                   |         |
|-----------------------------------|---------|
| 1. (क) ताजिकनीलकण्ठी (वर्षतन्त्र) | 60 अङ्क |
| (ख) लघुपाराशरी                    | 40 अङ्क |

(13) सामान्य पौरोहित्य (प्रायोगिक सहित)

पत्र संख्या	ग्रन्थ	पूर्णांक 100
अ. (क)	षोडश संस्कार मात्र संस्कार भास्कर	20 अङ्क
(ख)	रुद्राष्टाध्यायी (माध्यन्दिन शाखीया)	20 अङ्क
(ग)	उपाकर्म पद्धति (माध्यन्दिनशाखीया)	20 अङ्क
व.	प्रायोगिक परीक्षा—(अ) भाग की	40 अङ्क

(14) भाषा विज्ञान तथा संस्कृत भाषा का इतिहास

त्रिवर्षीय शास्त्री परीक्षा वै० वर्ग 3 में भाषा विज्ञान तथा संस्कृत

भाषा का इतिहास

— पाठ्यक्रम —

प्रथम वर्ष (भाषा विज्ञान)

प्रथम पत्र पूर्णांक 100

1. भाषाविज्ञान का स्वरूप तथा उसका महत्व ।
2. भाषाविज्ञान का अन्य विज्ञानों से सम्बन्ध ।
3. निरुक्त और भाषाविज्ञान की तुलना ।
4. भाषा की उत्पत्ति के सिद्धान्त ।
5. भाषा के अङ्गों की उत्पत्ति, विकास तथा उनमें परिवर्तन ।
6. भाषा विज्ञान का साहित्यिक भाषा से सम्बन्ध ।
7. प्राचीन भारत में भाषाविज्ञान का इतिहास ।

—————

## संस्कृत संकाय

त्रिवर्षीय शास्त्री पाठ्यक्रम की द्वितीय वर्ष परीक्षा,

1972 व 1973

का पाठ्यक्रम व पाठ्य पुस्तकें

## वर्ग (1) अनिवार्य विषय

## 1. सामान्य संस्कृत

(क) व्याकरण (प्रक्रिया कारक एवं समासों का ज्ञान)	25
और इन प्रकरणों के आधार पर अशुद्धि संशोधन ।	
(ख) अनुवाद (हिन्दी से संस्कृत)	20
(ग) पद्य--किरातार्जुनीय (1, 2 सर्ग)	20
(घ) गद्य--कादम्बरी (शुकनाशोपदेश से महाश्वेता वृत्तान्त तक)	35

## सहायक ग्रन्थ

1. महादेव शास्त्री—गुप्ता शुद्धि प्रदर्शन
2. कारक, सिद्धान्त कौमुदी के आधार पर
3. कपिलदेव द्विवेदी—प्रौढ़ रचनानुवाद कौमुदी

## 2. सामान्य हिन्दी

एक प्रश्न-पत्र 100 अंकों का होगा तथा समय 3 घण्टे का होगा ।  
प्रश्न-पत्र में पांच प्रश्न निम्न प्रकार से होंगे—

1. अपठित अभ्यास— 24 अंक  
चार अवतरण व्याख्या के लिये होंगे । उनमें से दो गद्य के और दो पद्य के होंगे । इनके सन्दर्भ नहीं पूछे जायेंगे ।  
(क) गद्य में व्याख्या करनी होगी ।  
(ख) पद्य में भावार्थ पूछा जायेगा ।
2. दूसरे प्रश्न में दो अवतरण गद्य-पद्य के होंगे, उनमें 12 अंक प्रत्येक पर कोई दो प्रश्नों पूछे जायेंगे ।
3. तीसरा प्रश्न निबन्ध पर होगा । 30 अंक

4. चौथा व्याकरण से संबंधित होगा, जिसके 12 अंक  
दो अंश होंगे—

(क) व्याकरण—(1) परिचय

(2) शुद्धीकरण

- (ख) रचना—लिखित विकीर्ण भावों का 10 अंक  
संकलन एवं विस्तार ।

5. संक्षिप्तीकरण—एक गद्यावतरण का संक्षिप्ती 12 अंक  
करण कराया जायेगा ।

व्याख्य—परीक्षार्थी के बौद्धिक-स्तर के निमित्त  
प्रत्येक विद्या में से कम से कम एक पुस्तक पढ़ाई  
जानी चाहिये । पुस्तकों में से प्रश्न नहीं पूछे  
जायेंगे ।

पठनीय पुस्तकें—

गद्य—

कहानी

1. प्रतिनिधि कहानियां—श्री राम मेहरा  
(श्री राम मेहरा एण्ड कम्पनी, आगरा)
2. प्रेम द्वादशी—प्रेमचन्द
3. आकाशदीप—जयशंकर प्रसाद

नाटक एवं एकांकी—

1. गौतमनन्द (नाटक)—जगन्नाथ प्रसाद मिलिन्द  
(किताब घर, ग्वालियर)
2. सात एकांकी—डा० बैकठ गर्मा  
(स्टूडेंट बुक कम्पनी, जयपुर)
3. प्रतिनिधि एकांकी—सूर्यदेव पाण्डेय  
(श्री राम मेहरा एण्ड कम्पनी, आगरा)

गद्य—संग्रह—

1. निबन्ध नवनीत—प्रवीण चन्द्र जैन  
(मेहरचन्द लक्ष्मण दास, दिल्ली)



2. हिन्दी गद्य नवनीत—डा० हरिचरण शर्मा  
(कालेज बुक डिपो, जयपुर)
3. गद्य-रूपावली—डा० गायत्री देवी वंश्य  
(मेहरचन्द लक्ष्मण दास, दिल्ली)

#### पद्य-संग्रह—

1. आधुनिक काव्य संग्रह—डा० मान्धाता ओझा  
(फ्रेंक ब्रदर्स, दिल्ली)
2. आधुनिक काव्य कलाधर—राजकुमार पाण्डेय  
(पदम बुक कम्पनी, जयपुर)
2. काव्य रश्मि—सुरेन्द्र उपाध्याय  
(जैन पुस्तक मन्दिर, जयपुर)

#### खण्ड काव्य—

4. पथिक—रामनरेश त्रिपाठी
5. पंचवटी—मैथिलीशरण गुप्त

#### व्याकरण—

1. सरल व्याकरण और रचना—व्यथित हृदय-संशोधनकर्ता  
डा० अम्बर प्रसाद (श्री राम मेहरा एण्ड कं० आगरा)
2. नवीन व्याकरण रचना—नरोत्तम दास स्वामी  
(शिवलाल अग्रवाल, आगरा)

#### वर्ग (2) वैकल्पिक मुख्य विषय

निम्नांकित में से कोई एक विषय ग्राह्य है। प्रत्येक पत्र का समय 3 घण्टे रहेगा।

#### या तो (1) ऋग्वेद

पत्र संख्या	ग्रन्थ	पूर्णांक
1. (क)	ऋगसंहिता 9 मण्डल सस्वर	50
(ख)	आश्वलायन गृहसूत्र मूल मात्र	50
2. (क)	ऋगसंहिता नवमण्डल के प्रथमाध्याय का पदपाठ	50
(ख)	ब्रह्मकर्म समुच्चय का षोडशसंस्कार प्रकरण	50
		100

या (1) शुक्ल यजुर्वेद

ग्रन्थ

पूर्णांक

- |   |    |       |
|---|----|-------|
| 1. (क) शुक्ल यजुःसंहिता—21 से 31 अध्याय     | 50 | } 100 |
| (ख) पारस्कर गृहसूत्र हरिहरनाथ्य संहिता 1, 2 | 50 |       |
- कांड

2.

- |  |    |       |
|--|----|-------|
| (क) शुक्ल यजुःसंहिता 1 से 5 अध्याय का पद पाठ | 75 | } 100 |
| (ख) पुरुष सूक्त का जटा व घन पाठ              | 25 |       |

या (1) सामवेद

ग्रन्थ

पूर्णांक

पत्र संख्या

- |    |  |    |       |
|----|--|----|-------|
| 1. | (क) सामसंहिता—उत्तराचिक 1 से 4 प्रपाठक             | 60 | } 100 |
|    | (ख) अरण्यगान 1 पर्व पादमान पर्व सस्वर              | 40 |       |
| 2. | (क) सामसंहिता उत्तराचिक (1 से 4 प्रपाठक को छोड़कर) | 60 | } 100 |
|    | (ख) रहस्यगान 1 पर्व, उहगान 1 पर्व                  | 40 |       |

या (1) अथर्ववेद

ग्रन्थ

पूर्णांक

पत्र संख्या

- |    |                                     |     |       |
|----|-------------------------------------|-----|-------|
| 1. | अथर्वसंहिता 14, 17 व 19 काण्ड सस्वर | 100 | } 100 |
| 2. | (क) अथर्वसंहिता 1 में कांड का पदपाठ | 70  |       |
|    | (ख) पंचदेवार्थवर्गीय सनाध्य         | 30  |       |

या (2) व्याकरण

ग्रन्थ

पूर्णांक

पत्र संख्या

- |    |   |     |
|----|---|-----|
| 1. | सिद्धान्त कौमुदी<br>(न्वादिगण से कुरादिगणान्त)            | 100 |
| 2. | सिद्धान्त कौमुदी<br>(रिजन्त प्रक्रिया से उत्तर कृदन्त तक) | 100 |

## या (3) साहित्य

प्रथम पत्र—

100

- |                                      |    |
|--------------------------------------|----|
| 1. किरातार्जुनीय (3, 4, 5 सर्ग)      | 35 |
| 2. गिण्ठपालवन् (3, 4, 5 सर्ग)        | 35 |
| 3. दशकण्ठवचन् (प्रारम्भ से 2 गुच्छक) | 30 |

द्वितीय पत्र

100

- |                                       |    |
|---------------------------------------|----|
| 1. कुवलयानन्द (प्रारम्भ से 60 अलंकार) | 50 |
| 2. साहित्यदर्पण (1 से 4 परिच्छेद)     | 50 |

सामान्य दर्शन

(द्वितीय वर्ष)

प्रथम पत्र

1. न्यायनाथ्य
2. योगसुत्रवृत्ति

द्वितीय पत्र

1. वेदान्तसार
2. पंचदशी (चित्रदीपान्त )

## या (5) वेदान्त

पत्र संख्या

ग्रन्थ

पूर्णांक

- |  |     |
|--|-----|
| 1. वेदान्त सूत्र-शांकरभाष्य भानुगोपी चतुःसूत्री सहित | 100 |
| 2.   | 100 |
| (क) वेदान्त परिभाषा                                  | 60  |
| (ख) सत्सद्वाद—पं. नहुसूदन झा द्वैत                   | 40  |

## या (6) नीमांसा

पत्र संख्या

ग्रन्थ

पूर्णांक

- |                                     |     |
|-------------------------------------|-----|
| 1.                                  | 100 |
| (क) नीमांसा न्याय प्रकाश—आपदेवद्वैत | 60  |
| (ख) अधिकरणकामुदी—देवनाथ काकुरद्वैत  | 40  |

2. 100

(क) शास्त्रदीपिका—पार्थसारथि तर्कपाद 60  
सहित i, 2 अध्याय

(ख) तन्त्ररत्नम्—प्रथम भाग 40

### या (7) न्याय

पत्र संख्या ग्रन्थ पूर्णांक

1. न्याय सिद्धान्त मुक्तावलि: (अनुमान खंड से 100  
समाप्ति पर्यन्त)

2. 100

(क) सिद्धान्त लक्षण जागदीशी 60

(ख) सारमंजरी—जयकृष्णतर्कालंकार 40  
(भा. नं. 2 रमानाथ मङ्गमदार स्ट्रीट,  
कलकत्ता )

### या (8) ज्योतिष

पत्र संख्या ग्रन्थ पूर्णांक

1. 100

(क) केतकी ग्रह गणित त्रिप्रश्नाविकारान्त 50

(ख) रेखा गणित (चतुर्थ्याध्याय) 20

(ग) तट्टयाराशरी (समग्र) 30

2. 100

(क) सरलत्रिकोणमिति (1 से 2 अध्याय तक) 60  
म. न. वामदेव शास्त्री

(ख) ताजिकनीलकण्ठी (प्रथम तन्त्र) 40

### या (9) धर्म शास्त्र

पत्र संख्या ग्रन्थ पूर्णांक

1. 100

(क) याज्ञवल्क्यस्मृति—(मिताक्षरानसहित, 80  
आचारध्याय और प्रायश्चित्ताध्याय)

(ख) जैमिनीय न्यायमाला 1 अध्याय 20

2.		100
(क) याज्ञवल्क्यस्मृति—व्यवहाराध्याय मिताक्षरा सहित	80	
(ख) मनुस्मृति ( 1, 7 अध्याय)	20	
या (10) जैन दर्शन		
पत्र संख्या	ग्रन्थ	पूर्णांक
1.		100
(क) जैनदर्शनसार चैनमुखदास	50	
(ख) आप्त परीक्षा—विद्यानन्दिकृत	50	
2. गोम्भटसार गणित भाग रहित		100
या (11) बौद्ध दर्शन		
पत्र संख्या	ग्रन्थ	पूर्णांक
1.		100
(क) वसुवन्धुकृता—विजप्तिमात्रतासिद्धि— विशिका स्वोपज्ञवृत्तियुता	30	
(ख) वसुवन्धुकृता—विजप्तिमात्रतासिद्धि-- त्रिशिका स्थिरमतिभाष्ययुता	30	
(ग) दिङ्० नागकृता—आलम्बन परीक्षा	40	
सहायक ग्रन्थ—		
1. सम एस्पेक्ट आफ दी डाक्ट्रीन आफ मंत्रेय एन्ड असंग —ड. टुच्ची		
2. बौद्ध-दर्शन ( 17, 18 अध्याय(—ग्राचार्य नरेन्द्रदेव		
2.		100
(क) दिङ्० नागकृत—प्रमाणसमुच्चय का प्रत्यक्ष परिच्छेद	50	
(ख) धर्मकीर्तिकृत—न्यायविन्दु-धर्मात्तरटीका सहित	50	

सहायक ग्रन्थ—

1. श्वेत्वात्स्की—बुद्धिस्ट लाजिक (दूसरा भाग)
2. डा०रुडल—फ्रेगमेन्ट्स आफ दिड्. नाग

### या (12) पौरोहित्य

पत्र सं.	ग्रन्थ	पूर्णांक
1.		100
	(क) मंत्रसंहिता और दण्डकमंत्र	70
	(ख) आशोचपंजिका	30
2.		100
	(क) ताजिक नीलकंठी—प्रथमद्वितीय तन्त्र	50
	(ख) जातकालंकार	50

### या (13) पुराणेतिहास

पत्र सं.	ग्रन्थ	पूर्णांक
1.		100
	(क) सांख्यतत्त्व कौमुदी	60
	(ख) प्राचीनभारतीय इतिहास की रूपरेखा (ले. जयचन्द विद्यालंकार)	40
2.		100
	(क) श्रीमद्भगवद्गीता—श्रीवरी टीका से सहायता ली जा सकती है ।	50
	(ख) श्रीमद्भगवत् दशमस्कन्ध—पूर्वार्द्ध	50

### या (14) आगम

1.		100
	(क) पट्टचक्रनिरूपणम् पूर्णानिन्दकृतम्	40
	(ख) कुलार्णवतन्त्रम् 1-4 उल्लास	40
	(ग) मृत्कान्तुति पादकापंचगन्ध	20
2.		100
	(क) वरिवस्यारहस्यम् भास्कररामकृतम्	50

(ख) स्पन्द सन्दोह	30
(ग) भावनोपनिषद् भास्कर भास्यम्	20

### वर्ग (3) वैकल्पिक विषय

निम्नांकित में से कोई दो विषय ग्राह्य हैं, किन्तु क्र० सं० 12 व 13 में से छात्र कोई एक विषय ही ले सकेगा ।

#### (1) हिन्दी साहित्य

इस विषय का 3 घंटे की अवधि का एक प्रश्न-पत्र होगा, जिसमें 100 पूर्णांक होंगे—

इस पत्र में अंक विभाजन निम्न प्रकार होगा—

(अ) पद्य की व्याख्या	30 अंक
(ब) अलंकार	15 अंक
(स) रस और भाव	7 अंक
(द) दोष	8 अंक
कवि-परिचय व काव्यसौंदर्य	15 अंक
पुस्तकों पर आलोचनात्मक प्रश्न	25 अंक

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योग 100 अंक

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#### (अ) पद्य पाठ्यग्रन्थ—

- 1) बालकाण्ड (तुलसीकृत रामायण गोरखपुर प्रकाशन) 187 दोहे तक
- 2) सूरसंकलन—हरिराम तिवारी (पी० सी० द्वादश श्रेणी एण्ड को० अलीगढ़)
- 3) कान्यसौरभ—डा० चन्द्र प्रकाश सिंह (इण्डियन प्रेस, इलाहबाद)  
(अन्तरभारती रहित)

#### (ब) अलंकार—

वक्रोक्ति, अनुप्रास, यमक, श्लेष, उपमा, प्रतीप, रूपक, स्मरण, भ्रान्तिमात्र, सन्देह, अपन्हुति, उत्प्रेक्षा, अतिशयोक्ति, दीपक, निदर्शना व्यतिरेक, अप्रस्तुतप्रशंसा, विभावना, अर्थान्तरन्यास, असंगति ।

(स) रस और भाव-रस निष्पत्ति (विभाव, अनुभाव, संचारी)

(द) दोष-श्रुतिकदु, च्युतसंस्कृति. अश्लीलत्व, प्रतीतत्व, ग्राम्यत्व, विलप्यत्व, न्यूनपदत्व, अधिकपदत्व, अक्रमत्व, दुष्क्रमत्व और पुनरुक्ति ।

## 2) अंग्रेजी साहित्य

इस विषय का तीन घण्टे का 100 प्रश्न-पत्र होगा ।

अंकों का विभाजन निम्न प्रकार होगा:-

(व) शेक्सपियर एण्ड ड्रामा	30 अंक
(व) पद्य	30 अंक
(स) सहायक पाठ्य पुस्तक	20 अंक
(द) (1) पाईटिकल टाइम्स	20 अंक

## (2) स्टेन्जा फार्मस

1) अभिस्तावित पुस्तकें (विशेष अव्ययनार्थ)

(क) रोमियो एण्ड जूलियट शेक्सपियर  
फ्रिड्टीन पोयट्स (ओ० यू० प्रेष्ठा) (वर्ड्स वर्य की कवितायें)

2) सहायक पाठ्य पुस्तक-मास्टर पीसेज आफ शार्ट स्टोरीज-दीवान चन्द

3) (क) पोयटिकल टाइम्स-लिरिक, आड, सोवेट, एलेजी, एपिक;  
वेलैड सैटायर, एवं इन्डिल

(ख) स्टेन्जा फार्मस-हिरोइक कम लेट, टरजाराइया, चौसेरियन  
स्टेन्जा, ओटावाराइया, राईम रीयल, स्पेन्सेरियन स्टेन्जा ।

सहायक पुस्तकें-

1) ए वैक ग्राउन्ड हू दी स्टेडी का इंगलिश लिटरेचर-  
वृजावीश प्रसाद

2) इंगलिश ग्रामर एण्ड कम्पोजीशन- ले० जे० सी० केस्कीलड

3) हाईस्कूल इंगलिश ग्रामर-रेन एण्ड मार्टिन

## (3) एक विदेशी भाषा

जर्मन

एक प्रश्न-पत्र 100 अंकों का होगा तथा समय 3 घण्टे का होगा ।

पत्र में अंक विभाजन निम्न प्रकार होगा-



(अ) जर्मन से संस्कृत या हिन्दी या अंग्रेजी में अनुवाद	25 अंक
(व) संस्कृत या हिन्दी या अंग्रेजी से जर्मन में अनुवाद	25 अंक
(स) निर्धारित पाठ्य पुस्तक पर आधारित तीन प्रश्नों में एक प्रश्न	

(प्रश्न राजनीति, दर्शन या साहित्य पर होंगे  
उत्तर लगभग 50 शब्दों में हो

25 अंक

(द) रचना

25 अंक

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योग 100 अंक

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ध्यातव्य-केवल अनुवाद के लिये कोप-प्रयोग अनुमत होगा ।

निर्धारित पुस्तक—

“Schulz-Griesbach : Deutsche Sprachlehre for Auslan-  
der” (Munich 1964) Chapters : 16 onwards.

या फ्रेन्च

एक प्रश्न पत्र 100 अंकों का होगा तथा समय 3 घण्टे का होगा ।  
पत्र में अंक विभाजन निम्न प्रकार होगा—

(अ) निर्धारित पाठ्यपुस्तक से प्रदत्त फ्रेन्च से संस्कृत या हिन्दी या अंग्रेजी में अनुवाद	30 अंक
(व) निर्धारित पाठ्यपुस्तक पर आधारित प्रश्नों के उत्तर	15 अंक
(स) संस्कृत या हिन्दी या अंग्रेजी से फ्रेन्च में अनुवाद	15 अंक
(द) व्याकरण	20 अंक
(ज) पत्रलेखन या अनुच्छेद लेखन या कहानी लेखन	20 अंक

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योग 100 अंक

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निर्धारित पाठ्यपुस्तक—

Mashurin Dounds : Modern French course  
(26-50 lessons)

या रसियन

एक प्रश्न-पत्र 100 अंकों का तथा समय 3 घण्टे का होगा ।

पत्र में अंक विभाजन निम्न प्रकार रहेगा—

(व) यू० एस० एस० आर. का इतिहास, भूगोल तथा संस्कृति	50 अंक
(द) रचना तथा व्याख्या	50 अंक
	योग 100 अंक

ध्यातव्य—अभ्यर्थी इस पत्र में संस्कृत या हिन्दी या अंग्रेजी या रसियन के माध्यम से उत्तर दे सकेंगे ।

निर्धारित पाठ्यपुस्तकें—

1. N. Potopova  
Learning Russian—Parts one, two and three (Progress Publishers, Moscow).
2. Russian as one speaks it by Khavonina.
3. Pulkina Russian Grammar.
4. Dictionaries Russian—English, English—Russian.
5. Dictionaries Russian—Hindi, Hindi Russian.
6. Dictionaries Sanskrit—Russian, Russian Sanskrit.
7. Academy of Science of the U.S.S.R. (Ed.)  
Publishers of Ministry of Education U.S.S R. (Ed.)  
History of the U.S.S.R.
8. Academy of Science of the U.S.S.R. (Ed.)  
Publishers of Ministry of Education U.S.S.R. (Ed.)  
Physical and Economic Geography of the U.S.S.R.
9. Ministry of Culture of the U. S. S. R., Culture  
Department Embassy of U.S.S.R., Culture and life  
of the U.S.S.R.

### या परसियन

एक प्रश्न-पत्र 100 अङ्कों का तथा समय 3 घण्टे का होगा। पत्र में अङ्क विभाजन निम्न प्रकार होगा—

(अ) गद्य, पद्य तथा नाटक के अवतरण का संस्कृत या हिन्दी या अंग्रेजी में अनुवाद	45 अंक
(ब) गद्य, पद्य तथा नाटक पर आधारित प्रश्न	45 अंक
(स) अलंकार शास्त्र	10 अङ्क
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	योग 100 अङ्क

निर्धारित पाठ्यपुस्तकें—

#### १. गद्य—

Nisabe Farsi by Dr. Shamooun Israeli and Prof. Zia Ahmed Badayuni, Department of Persian, M.U. Aligarh Rs. 5/—.

The following portion only as prescribed :  
Intekhab az siyosatnama.

#### २. पद्य—

Nisabe Farsi (For II Year B.A.) by Mohammed Shamooun Isarel and Prof. Zia Ahmed Badayuni. Department of Persian, M.U. Aligarh Rs. 5/—.

The following portion of poetry section is prescribed :  
Adabiyate Jadeed : Bahar and Por Daud.

#### ३. नाटक—

Wukalae Muraface Edited by Mohammed Khalid M.A. .  
Published by Anwar Ahmedi Press, Allahabad.

#### ४. अलंकार शास्त्र—

Ishtiqaq, Shibha Istiqaq, Miratun nazeer, Tanseeqxassifat, Tajneese tam, Tajneese Khatti, Tajneese Zaid, Siyaqxatual Adad.

#### 4 इतिहास

इस विषय में 3 घंटे की अवधि तथा 100 पूर्णांक का एक प्रश्नपत्र होगा—

प्रश्नपत्र— विश्व इतिहास की रूपरेखा

1. प्रगतिहासिक मानव ।
2. मिश्र देवलोनिया, चीन और भारत की प्रारम्भिक समस्याएं ।
3. बुद्ध और कमप्यूजियस ।
4. ग्रीक पैरिक्लीज का समय ।
5. ग्रीस का रोम को अनुदान ।
6. रोम की मण्डतन्त्र-शासन—व्यवस्था, रोम साम्राज्य, अगस्ट का समय ।
7. इस्लाम और ईसाई मत का प्रसार ।
8. पवित्र रोम साम्राज्य, साम्राज्य और पोप सत्ता में विरोध ।
9. पुर्नजागृति और सुधार ।
10. राजतन्त्र का युग ।
11. सुधारप्रिय निरंकुश शासकों का युग-फ्रेडरिक महान ।
12. इंग्लैंड में सीमित राजतन्त्र का विकास, रक्तहीन राज्य-क्रान्ति, संवर्धो सुधार, अमेरिका और फ्रांस की राज्य क्रान्तियाँ-नेपोलियन बोनापार्ट ।
13. औद्योगिक क्रान्ति—उसके कारण और प्रभाव ।
14. इटली और जर्मनी का एकीकरण ।
15. रूसी और पूर्वोत्तर प्रश्न ।
16. जापान का उत्थान ।
17. प्रथम विश्वयुद्ध की पृष्ठभूमि ।
18. द्वितीय महायुद्ध के पूर्व का विश्व । द्वितीय महायुद्ध के प्रभाव ।
19. विश्व शान्ति के लिये प्रयत्न ।

निम्न पुस्तकों में से किसी भी पुस्तक से सहायता ली जा सकती है—

1. शार्ट हिस्ट्री आफ वर्ल्ड—हर्नशा (मैकमिलन)
2. एन आउट लाइन हिस्ट्री आफ दी वर्ल्ड—एच० ए० डेविड (ओ० यू० पी०)

- 3) ए गार्ट हिस्ट्री आफ दी वर्ल्ड (एब्रिज्ड) एच० वी० वॉल्स  
(थिक्स लाइब्रेरी सीरीज नं० 6) ।
- 4) ए ब्रीफ हिस्ट्री आफ सिविलाइजेशन-हालेण्ड (ओ० यू० पी०)
- 5) वर्ल्ड हिस्ट्री (रिवाइज्ड एडिशन)-एच वेवस्टर हैथ एण्ड कं०  
न्यूयार्क, लंदन) ।
- 6) विश्व इतिहास की रूपरेखा—प्यारेलाल शर्मा  
(नन्द किशोर एण्ड ब्रदर्स, बनारस) ।
- 7) विश्व—सम्यता का इतिहास—पी० के० मझूमदार  
(स्टूडेंट्स बुक कं०, जयपुर) मूल्य रु० 5) ।
- 8) विश्व इतिहास—हरिश्चंकर शर्मा (विद्या भवन, जयपुर)  
मूल्य रु० 3) 75 ।

### 5) राजनीति विज्ञान

इस विषय में 3 घंटे की अवधि का 100 पूर्णांक का एक प्रश्नपत्र होगा ।

प्रश्नपत्र

आधुनिक प्रमुख शासन प्रणालियाँ

इंग्लैंड, संयुक्तराज्य अमेरिका, रूसी—समाजवादी तथा गणतन्त्र  
तथा स्विटजरलैंड ।

पाठ्य ग्रन्थ—

- 1) के एण्ड वर्मा—संयुक्तराज्य अमेरिका का संविधान ।
- 2) साभरमल तथा गुप्ता—प्रमुख विदेशी संविधान ।
- 3) वी० एम० शर्मा—प्रमुख देशों की शासन—प्रणालियाँ ।
- 4) आर० पी० अरगल—आधुनिक संविधान ।
- 5) एम० पी० शर्मा—ब्रिटिश संविधान ।
- 6) वी० एन० वर्मा एवं एन० के० सिन्हा—विश्व के प्रमुख  
विधान ।

### अर्थशास्त्र 6

परीक्षार्थी को निम्न लिखित दो प्रश्नों में से एक पत्र लेना होगा,  
जिसके अंक 100 व समय 3 घंटे होगा ।

प्रश्नपत्र—1) भारत वर्ष में आर्थिक नियोजन

### अथवा

- 2) तुलनात्मक आर्थिक विकास (इंग्लैंड, सोवियत रूस व भारत के तुलनात्मक विकास की प्रमुख गतिविधियाँ)

### 1) भारतवर्ष में आर्थिक नियोजन—

स्वतन्त्रता पूर्व भारत में नियोजन संबंधी विचारों का अम्युदय एवं विकास, भारत की पंचवर्षीय योजनाओं के उद्देश्य एवं रीति योजनाओं के वित्तीय साधन, मानवीय साधनों (छिपी हुई बेरोजगारी) के उपयोग संबंधी समस्याएँ।

कृषिनीति एवं विकास, औद्योगिक नीति एवं औद्योगिक विकास की गति ( ) औद्योगिक क्षेत्र में सार्वजनिक एवं निजी क्षेत्र का विकास, सार्वजनिक औद्योगिक निकायों की समस्याएँ, विदेशी व्यापार संबंधी कठिनाइयाँ।

नियोजन काल में देश का आर्थिक विकास, चतुर्थ योजना के प्रति दृष्टिकोण।

राजस्थान में नियोजन काल में आर्थिक विकास, राजस्थान की चतुर्थ योजना की मुख्य विशेषताएँ, राजस्थान के विकास के प्रेरक एवं सम्भावित साधन।

### पाठ्य ग्रन्थ—

- 1) गाडगिल—आर्थिक नीति एवं विकास।
- 2) डा० जोशी जे० एम०—तुलनात्मक आर्थिक विकास एवं भारत में आर्थिक विकास की समस्याएँ।  
प्रकाशक—कालेज बुक डिपो, जयपुर।
- 3) अग्रवाल—श्रीमन्नारायण—भारतीय संयोजन की नई दिशाएँ।

### सहायक पत्र पत्रिकाएँ—

- 1) भारत सरकार—प्रथम, द्वितीय, तृतीय, एवं चतुर्थ योजना रिपोर्टें।
- 2) राजस्थान सरकार—प्रथम, द्वितीय, तृतीय, एवं चतुर्थ योजना रिपोर्टें।

- 3) रिजर्व बैंक आफ इन्डिया बुलेटिन ।
- 4) आर्थिक समीक्षा ।
- 5) राजनैतिक एवं आर्थिक समीक्षा ।
- 6) योजना ।
- 7) दैनिक—इकोनोमिक टाइम्स ।

अथवा

2) तुलनात्मक आर्थिक विकास—(इंग्लैंड, सोवियत रूस व भारत के तुलनात्मक विकास की प्रमुख गतिविधियाँ)

1) आर्थिक व्यवस्थायें—पूँजीवाद, समाजवाद, नियोजित अर्थ-व्यवस्था ।

2) औद्योगिक क्रान्ति के समय से इंग्लैंड का विकास—क्रान्ति के पूर्व इंग्लैंड की आर्थिक अवस्था, क्रान्ति के कारण, विशेषतायें, परिणाम, ब्रिटेन की औद्योगिक एवं वाणिज्यिक श्रेष्ठता ।

1870 के बाद ब्रिटिश—उद्योग, सूती वस्त्र, लोह स्पात, कारखाना व्यवस्था एवं अधिनियम ब्रिटिश कृषि, रेलवे, जहाजरानी, श्रमिक संघवाद, स्वतन्त्र व्यापार नीति और इसका पतन ।

3) 1917 की क्रान्ति से सोवियत रूस का आर्थिक विकास—क्रान्ति के पूर्व रूस की दशा, क्रान्ति कारण एवं परिणाम । नवीन आर्थिक नीति के कार्यक्रम, आर्थिक पुनरोद्धार एवं कैंची संकट, रूस की पंचम वर्षीय एवं सात वर्षीय योजनायें—उद्देश्य एवं प्रगति मूल्यांकन । सोवियत नियोजन पद्धति रूप में नियोजन का विकास एवं संगठन ।

4) स्वतन्त्रता उपरान्त भारत में आर्थिक नियोजन—भारतीय योजनाओं के उद्देश्य व तरीके, मानव शक्ति का उपभोग—वैरोजगारी एवं अर्ध वैरोजगारी की समस्यायें ।

कृषि विकास की व्यूह रचना, नीति एवं विकास, औद्योगिक नीति एवं विकास, विदेशी व्यापार की समस्या, योजना काल में प्रगति ।

पाठ्य ग्रन्थ—

- 1) डा० जोशी जे० एम०—तुलनात्मक आर्थिक विकास एवं भारत में आर्थिक विकास की समस्यायें ।  
प्रकाशक—कालेज बुक डिपो, जयपुर ।

(2) GHOSH-ALAK—Indian Economy.

(3) Alac Nove —Soviet Economy

(4) LIPSON —GROWTH OF ENGLISH SOCIETY

### 6) सांख्यिकी

इस विषय में 3 घंटे की अवधि का 100 पूर्णांक का एक प्रश्नपत्र होगा।

प्रश्नपत्र : सांख्यिकी विधियाँ

Fitting of straight lines and parabolas. Regression and correlation. Random sampling and use of random number X, t and F, distributions without derivation and their applications. Significance of correlation coefficients. Association and contingency. Simple non-parametric tests (Sign, Run and Median) without derivations.

Unbiasedness and efficiency of estimators. Simple notions of interval estimation. Confidence intervals for  $\mu$  and  $\sigma$  in normal case. The two kinds of errors in testing of hypotheses.

Interpolation and Extrapolation. Newton's formula for equal-intervals.

*Books recommended :*

1. Umarji, R.R. : Probability and Statistical Methods.
2. Goon and Others: Fundamentals of Statistics.
3. Elhance, D.N. : Fundamentals of Statistics.

### 8) लोक प्रशासन

इस विषय में 100 पूर्णांक तथा तीन घंटे की अवधि का एक प्रश्न पत्र होगा।

प्रश्न पत्र—राजस्थान में राज्य प्रशासन

राज्य प्रशासन का संगठन व कार्य। राज्यपाल-उसका महत्व व प्रशासन में कार्यभार, मुख्यमंत्री और मंत्री परिषद्।



प्रशासनिक, विधायकी व न्यायालयीय बंग व उनमें पारस्परिक संबंध :

राज्य सचिवालय का संगठन व कार्य :

मुख्य सचिव—संचिवानयीय संगठन के प्रधान के रूप में ।

कुछ विजिष्ट विभागों के संगठन—

योजना विभाग, कृषि विभाग, विकास विभाग,

निदेशालय—निदेशालय, कृषि, श्रम

बोर्ड्स —राजस्व व राजस्थान राज्य विद्युत बोर्ड्स के संगठन व कार्य ।

राजस्थान में जिला प्रशासन—

जिलाधीन का कार्यवृत्त—जिला प्रशासन के प्रधान के रूप में तहसील व निजामत स्तर पर प्रशासन ।

राजस्थान में प्रशासनिक नागरिक ( सिविल ) सेवाएँ—नियुक्ति, प्रशिक्षण, पदोन्नति और वेतन ।

अभिस्तुत पृष्ठक—

1. एन. वी. पायली—कांस्टीट्यूशनल गवर्नमेन्ट इन इण्डिया ।
2. एस. एस. खेर—डिस्ट्रिक्ट एडमिनिस्ट्रेशन इन इण्डिया ।
3. शास्त्री—डिस्ट्रिक्ट एडमिनिस्ट्रेशन ।

संदर्भ ग्रन्थ—

1. गवर्नमेन्ट आफ राजस्थान—एन्थुवेल एडमिनिस्ट्रेशन रिपोर्ट
2. आई. आई. पी. ए.—रेवेन्यू बोर्ड्स
3. राजस्थान गवर्नमेन्ट—सेक्रेटिरिएट
4. „ —रिपोर्ट्स आफ एडमिनिस्ट्रेशन  
रिफार्मज कमेटी, 1964 ।
5. „ —रिपोर्ट आफ राणावत कमीशन 1968  
अथवा

प्रश्न पत्र—

राजस्थान में स्वायत्त प्रशासन

इसका उद्देश्य राजस्थान में ग्रामीण व जहरी स्थानीय प्रशासन के क्षेत्र का ज्ञान करवाना है—

1. आधुनिक राज्य में स्थानीय स्वशासन का महत्व ।
2. राजस्थान के विशिष्ट सन्दर्भ में भारत में स्थानीय स्वशासन का विकास ।
3. राजस्थान में स्थानीय स्वशासन का वर्तमान ढांचा,  
राजस्थान में नगरपालिका शासन का वर्गीकरण ।  
नगरपालिका । परिपद—इसकी संरचना, शक्तियां व कार्य,  
अध्यक्ष । चेयरमेन, व्यक्तिगत प्रशासन—नगरपालिका आधुनिक  
और कार्यकारी पार्षद ।
4. प्रजातांत्रिक विकेंद्रीकरण—पंचायती राज संस्था में  
जिला परिषद, पंचायत—उनकी संरचना, प्रमुख व प्रधान की  
व्यक्तिगत प्रशासन में शक्तियां व कार्य ।  
सचिव जिला परिषद, वी. डी. ओ., वी. एल. डब्ल्यू व पंचायत  
सचिव के कार्य व उनकी शक्तियां ।
5. स्थानीय स्वशासन संस्थाओं का वित्तीय विवरण ।
6. स्थानीय स्वशासन संस्थाओं पर राजकीय नियंत्रण ।

अभिस्तुति पुस्तकें—

1. आर. एल. खन्ना—म्युनिसिपल गवर्नमेंट एण्ड  
एडमिनिस्ट्रेशन इन इण्डिया ।
2. आर. आरगल—म्युनिसिपल गवर्नमेंट इन इण्डिया ।
3. वी. माहेश्वरी—स्टडीज इन पंचायत राज ।
4. नारायण चतुर्वेदी—पंचायती राज इन राजस्थान ।

### (9) मनोविज्ञान

पत्र संख्या	ग्रन्थ	पूर्णाङ्क
1.	भारतीय मनोविज्ञान—विश्वेश्वर सिद्धांत जिरोमणि	100

### (10) समाज शास्त्र

पत्र संख्या	ग्रन्थ	पूर्णाङ्क
1.	आधुनिक समाज शास्त्र	100

सहायक पुस्तकें—

1. इन्ट्रोडक्शन टू सोशियोलोजी—जिलिन एण्ड जिलिन
2. हैण्डबुक आफ सोशियोलोजी—आगवर्न एण्ड निमकाफ

### (11) गृह विज्ञान

इस विषय में 3 घण्टे की अवधि तथा 100 पूर्णाङ्क का एक प्रश्न पत्र होगा ।

शरीर विज्ञान—

मादक वस्तुओं का भूख तथा पाचन पर प्रभाव ।

रेचन यन्त्र—

त्वचा, गुर्दा तथा अतड़ियां ।

हृदयर संचारण यन्त्र—

हृदयर का कार्य, रक्त-संचारण । श्वास लेने के यन्त्र । स्वर यन्त्र, टेंटुआ, फुफुस, ग्रैवेय-नलिका, ठीक प्रकार श्वास लेना । फुफुस में प्राणवायु ग्रहण करने का सामर्थ्य तथा इसका महत्व । व्यायाम तथा नाड़ी मण्डल । आंख, कान तथा नाक की बनावट । आंख के रोग तथा उनका उपचार । जननेन्द्रियों का ग्रध्ययन ।

स्वास्थ्य रक्षा—

मलेरिया, तपेदिक, कोढ़, चेचक, हैजा, प्लेग, मोतीभर्रा के रोक-थाम का निदान तथा चिकित्सा ।

समाज शास्त्र—

कम उम्र में विवाह करने के दोष तथा गुराओं की समीक्षा । विवाह के भावनात्मक, सामाजिक, आर्थिक तथा यौन संबंधी पहलुओं पर विचार । पारिवारिक बजट पर विचार ।

शिशु संरक्षण—

शिशु का विकास, शरीर-रचना, वृद्धि तथा चरित्र-निर्माण ।

भोजन—

तरकारी, अचार, मुरब्बा, मीठा आचार, शिकंजी, साग, फलों का मुरब्बा तथा दूध की मीठी वस्तुयें बनाना ।

सिलाई—

प्रत्येक वर्ग से एक वस्त्र बनाना आवश्यक है ।

1. वच्चों के फ्राक, पेटीकोट तथा ओढ़नी ।
2. वास्कोट, जंफर तथा गर्मी के वस्त्र ।
3. फैंसी वस्त्रों का एक सेट ।

### (12) फलित ज्योतिष

पत्र संख्या	ग्रन्थ	पूर्णाङ्क
1.		100
	(क) वृहज्जातक 1 से 13 अध्याय तक	50
	(ख) सामुद्रिक रहस्य—ले० गोपेशकुमार ओझा	50

### (13) सामान्य पौरोहित्य

पत्र संख्या	ग्रन्थ	पूर्णाङ्क
1.		100
	(क) पारस्करगृह्यसूत्र सपरिशिष्ट (मूल मात्र)	50
	(ख) मुहूर्त चिन्तामणि (शुभाशुभ प्रकरण)	30
	(ग) जातकालंकार का भाषाव्यायान्त	20

### (14) भाषा विज्ञान तथा संस्कृत भाषा का इतिहास

#### भाषा विज्ञान

प्रथम पत्र

1. भाषा की परिवर्तनशीलता—देशकालभेद से ।
2. भाषाओं का वर्गीकरण ।
3. पारिवारिक एवं आकृतिमूलक वर्गीकरण ।
4. भारोपीय भाषा परिवार, यूरोशिया परिवार, ईरानी भाषा तथा अन्य भाषाओं में परिवर्तन ।
5. संस्कृत की वर्णमाला का अध्ययन ।
6. ध्वनि एवं ध्वनिविकार के कारण तथा नियम ।
7. अर्थ परिवर्तन की दिशाएँ और उनके कारण ।
8. भारतीय लिपियों की उत्पत्ति, विकास एवं उनका इतिहास ।
9. ब्राह्मी और खरोष्ट्री लिपियों का विवेचन ।

## सहायक ग्रन्थ—

1. भाषा विज्ञान—श्यामसुन्दर दास ।
2. सामान्य भाषा विज्ञान—डा० वावूराम सक्सेना ।
3. तुलनात्मक भाषा शास्त्र—डा० मंगल देव शास्त्री ।
4. संस्कृत भाषा विज्ञान—चौखम्बा विद्या भवन, वाराणसी

## संस्कृत संकाय

त्रिवर्षीय शास्त्र पाठ्यक्रम की अन्तिम वर्ष परीक्षा, 1974-75 का पाठ्यक्रम तथा पाठ्य पुस्तकें

## वर्ग (1) अनिवार्य विषय

## सामान्य संस्कृत

दो प्रश्न पत्र होंगे । प्रत्येक प्रश्न पत्र 100 अंक का होगा तथा प्रत्येक का समय 3 घण्टा होगा—

## प्रथम पत्र

पूर्णांक 100

(क) व्याकरण (वृद्धन्त, तद्धति और स्त्री प्रत्यय)	25 अंक
(ख) वेद-ऋग्वेद सोरभम	25 अंक
(ग) दर्शन तर्क-संग्रह	25 अंक
(घ) वर्म याज्ञलक्य स्मृति-आचारा ध्याय (गृहस्यवर्म प्रकरण तक)	25 अंक

## द्वितीय पत्र

पूर्णांक 100

(क) संस्कृत साहित्य का इतिहास	50 अंक
(ख) भारतीय संस्कृति का इतिहास	20 अंक
(ग) निबन्ध	30 अंक

## सहायक ग्रन्थ

1. संस्कृत साहित्य की रूपरेखा—चन्द्रशेखर पाण्डे ।
2. संस्कृत साहित्य का इतिहास—बलदेव उपाध्याय
3. संस्कृत साहित्य विमर्श—द्विजेन्द्र नाथ मिश्र

4. भारतीय संस्कृति का इतिहास—डा० एन. डी. सिंह ( साहित्य मंडार मेरठ)
5. भारतीय संस्कृति का उत्थान—डा० रामजी उपाध्याय  
(रामनारायण लाल वेनी माधव इलाहाबाद)
6. भारतीय संस्कृति के मूल तत्व डा. आर. पी. जोशी  
(साहित्य निकेतन, कानपुर,)
7. प्रबन्ध प्रभाकर—डा० मंगलदेव शास्त्री ।

### वर्ग (2) वैकल्पिक मुख्य विषय

निम्नांकित में से कोई एक विषय ग्राह्य है । प्रत्येक पत्र 3 घण्टे का होगा ।

### या तो (1) ऋग्वेद (प्रयोग सहित)

पत्र संख्या	ग्रन्थ	पूर्णाङ्क 100
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#### प्रथम पत्र

- |   |         |
|---|---------|
| 1. प्रतिष्ठा मयूख                         | 60 अङ्क |
| ब्रह्मकर्ममुच्चयका श्राद्धप्रकरण सम्पूर्ण | 40 अङ्क |

#### द्वितीय पत्र

- |  |         |
|--|---------|
| (क) स्वरवैदिकी प्रक्रिया 1 से 4 अध्याय<br>सिद्धान्त कौमुदी | 20 अङ्क |
| (ख) मीमांसापरिभाषा कृष्णयजुर्वेद                           | 20 अङ्क |
| (ग) प्रायोगिक परीक्षा—प्रथम पत्र पर<br>आधारित              | 60 अङ्क |

### या (1) यजुर्वेद

पत्र संख्या	ग्रन्थ	पूर्णाङ्क 100
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#### प्रथम पत्र

- |  |         |
|--|---------|
| (क) प्रतिष्ठा प्रकार का 7 वां परिच्छेद मात्र | 40 अङ्क |
| (ख) शान्ति प्रकाश चतुर्थीलाल का              | 30 अङ्क |
| (ग) श्राद्धविवेक 2, 3 व 4 परिच्छेद           | 30 अङ्क |

## द्वितीय पत्र

(क) वैदिकी प्रक्रिया—1 से 4 अध्याय सिद्धान्त कौमुदी	20 अङ्क
(ख) मीमांसापरिभाषा—कृष्णमज्जा	20 अङ्क
(ग) प्रायोगिक परीक्षा—प्रथम पत्र पर आधारित	60 अङ्क

## या (1) सामवेद

पत्र संख्या	ग्रन्थ	पूर्णाङ्क 100
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## प्रथम पत्र

गोमिलगृह्य सूत्र—कह्लभाग मात्र  
एकोद्दिष्टपावर्ण श्राद्धपद्धति

## द्वितीय पत्र

पूर्णाङ्क 100

(क) वैदिकी प्रक्रिया—1 से 4 अध्याय सिद्धान्त कौमुदी	20 अङ्क
(ख) मीमांसापरिभाषा—कृष्णमज्जा	20 अङ्क
(ग) प्रायोगिक परीक्षा—प्रथम पत्र पर आधारित	60 अङ्क

## या (2) व्याकरण

पत्र संख्या	ग्रन्थ	पूर्णाङ्क
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## प्रथम पत्र

(क) परिभाषेन्दु शेखर	70 अङ्क
(ख) न्याय प्रदीप	30 अङ्क
(पं. श्री गंगासहाय शर्मा, वृं दी खेमराज श्रीकृष्णदास, बम्बई	

## अथवा

(ख) व्याकरण शास्त्र का इतिहास रमाकान्त मिश्रकृत	30 अङ्क
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## अथवा

(ख) सर्वदर्शन संग्रह—माधवचार्य (पाणिनीय दर्शन प्रकरण)	30 अङ्क
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द्वितीय पत्र

(क) प्रोड मनोरमा-अजन्त पुल्लिपान्त	50 अङ्क
(ख) वैयाकरण भूपसार	50 अङ्क

या (3) साहित्य

पत्र संख्या	ग्रन्थ	पूर्णाङ्क 100
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द्वितीय पत्र

(क) कादम्बरी (उज्जयिनी वर्णन से इन्द्रायुवक पर्यन्त तक)	30 अङ्क
(ख) उत्तररामचरितम्	20 अङ्क
(ग) मृच्छकटिकम्	20 अङ्क
(घ) साहित्य दर्पण (छठा परिच्छेद मात्र)	30 अङ्क

द्वितीय पत्र

(क) कुवलयानन्द—(61 वे अलंकार से सम्पूर्ण)	40 अङ्क
(ख) साहित्यदर्पण (5, 7 से 9 परिच्छेदान्त)	40 अङ्क
(ग) सरल रचना (उपजाति, वशस्थ, वसन्त तिलका एवं मालिनी छन्दों के आचार पर )	20 अङ्क

(4) सामान्य दर्शन

पत्र संख्या	ग्रन्थ	पूर्णाङ्क 100
प्रथम पत्र		

सर्वदर्शन—संग्रह (चार्वाक, बौद्ध वैशेषिक)  
जैन दर्शन सार (चैतन्यदास कृत)

द्वितीय पत्र

सांख्यतत्त्वकौमुदी  
पञ्चदशी ( चित्रदीपान्त )

पूर्णाङ्क 100

या (5) वेदान्त

पत्र संख्या	ग्रन्थ	पूर्णाङ्क 100
प्रथम पत्र		

(क) तैत्तिरीयोपनिषद् शंकर भाष्य सहित 30 अंक



(ख) छान्दोग्योपनिषद् 5 से 8 अध्याय

शंकर भाष्य सहित

30 अंक

(ग) भगवद्गीता (1, 6 अध्याय)

मधुसूदनटीका सहित

40 अंक

द्वितीय पत्र

पूर्णाङ्क 100

(क) ब्रह्मसूत्र—व्याख्या सहित

50 अंक

(ख) वेदान्त कारिकावली

50 अंक

या (6) सीमांता

पत्र संख्या

ग्रन्थ

पूर्णाङ्क 100

प्रथम पत्र

(क) तंत्ररत्नम्—दूसरा भाग

50 अंक

(ख) भाट्ट चिन्तामणि—म. म. गागाभट्ट

50 अंक

द्वितीय पत्र

पूर्णांक 100

(क) मानमेयोदय—नारायण भट्ट कृत

30 अंक

(ख) तौतातिकमततिलक (प्रथम अध्याय)

30 अंक

(ग) जैमिनीय न्याय माला (1 से 3 अध्याय)

40 अंक

या (7) न्याय

पत्र संख्या

ग्रन्थ

पूर्णाङ्क 100

न्याय दर्शनम् (वात्स्यायनभाष्य)

द्वितीय पत्र

पूर्णाङ्क 100

प्रथम पत्र

पक्षताजगदीशी—सार्वभौम लक्षणान्त

या (8) ज्योतिष

पत्र संख्या

ग्रन्थ

पूर्णांक 100

प्रथम पत्र

(क) सूर्य सिद्धान्त (चन्द्रग्रहणाधिकारान्त)

60 अंक

(ख) जैमिन्यसूक्त (आयुर्दायाध्यान्त)

20 अंक

(ग) गोलपरिभाषा

20 अंक

द्वितीय पत्र पूर्णांक 100

- (क) सूर्य सिद्धान्त (अवशिष्टांश) 30 अंक  
जातक पारिजानक (आयुर्दायाव्याय) 10 अंक  
गोलीयरेखागणित—(मीठालाल ओझा) 10 अंक

(ख) प्रायोगिक

- (अक्षांश देशान्तर का संस्कार देकर विभिन्न स्थानों के जन्म पत्र निर्माण व फलादेश 25 अंक  
वैजयन्ती पंचाक निर्माण गणित के आवार पर तिथि, नक्षत्र योग करण का साधन तथा सामान्य यंत्र परिचय 25 अंक

या (9) धर्म शास्त्र

पत्र संख्या अन्य पूर्णांक 100

प्रथम पत्र

- (क) कालमाधव सम्पूर्ण—माधवाचार्यकृत 60 अंक  
(ख) निर्णयसिन्धु (प्रथम परिच्छेद)  
—कमलाकर भट्ट 40 अंक

द्वितीय पत्र पूर्णांक 100

- (क) गौतमधर्म सूत्र (द्वितीय व तृतीय प्रश्न) 30 अंक  
(ख) अविकरण कौमुदी—देवनाथ ठाकुर कृत 30 अंक  
(ग) जैमिनीय न्यायमाला विस्तार  
(अध्याय 1 व 2) 40 अंक

या (10) जैन दर्शन

पत्र संख्या अन्य पूर्णांक 100

प्रथम पत्र

- (क) सप्तभंगितरंगिणी—विमलदास कृत 50 अंक  
(ख) राजवापिक (1, 2 अध्याय) 50 अंक

द्वितीय पत्र पूर्णांक 100

- (क) प्रमेयरत्नमाला 50 अंक  
(ख) प्रमाणमीमांसा (प्रथमाध्यायमाला) 50 अंक

## या (11) बौद्ध दर्शन

पत्र संख्या

ग्रन्थ

पूर्णांक 100

प्रथम पत्र

- (क) नागार्जुनकृत माध्यमिक कारिका 50 अंक  
 (ख) चन्द्रकीर्तिकृत प्रसन्न पदा (1/15/18/22/24  
 व 25 परीक्षा) 50 „

सहायक ग्रन्थ—

1. सेन्ट्रल फिलासफी आफ बुद्धिज्म—डा. जी. आर. वी. मूर्ति
2. आउटलाइन्स महायान बुद्धिज्म—सुजुकी
3. बौद्ध धर्म दर्शन (19 अध्याय)—आचार्य नरेन्द्रदेव ।

द्वितीय पत्र

पूर्णाङ्क 100

बौद्धिक दार्शनिक साहित्य का इतिहास—

1. पालित्रिपिटिकों का परिचय
2. संगीत
3. महायान सूत्र
4. अष्टादशनिकायों का विकास
5. महायान का उद्यम और विकास
6. सर्वास्तिवाद—वैभाषिक—सौत्रान्तिक  
माध्यमिक तथा योगस्वार मतों का विकास
7. तन्त्रयान

सहायक ग्रन्थ

1. बौद्धधर्म के विकास का इतिहास—डा. गोविन्द चन्द्र पाण्डेय ।
2. बौद्धगान और दोहा की भूमिका—म. म. हर प्रसाद शास्त्री
3. पालिसाहित्य का इतिहास—भरतसिंह उपाध्याय
4. बौद्धधर्म दर्शन भूमिका सहित—आचार्य नरेन्द्र देव
5. नागेन्द्रनाथ उपाध्याय कृत तांत्रिक साहित्य पर म. म. पंडित  
गोपीनाथ कविराज लिखित भूमिका
6. विन्टरनिज—हिस्ट्री आफ इण्डियन लिटरेचर  
(द्वितीय भाग नथमांस)

### या (12) पौरोहित्य

पत्र संख्या                      ग्रन्थ                      पूर्णांक 100

#### प्रथम पत्र

(क) शान्तिसार	35 अंक
(ख) श्राद्धविवेक	35 „
(ग) प्रतिष्ठा प्रकाश	30 „

#### द्वितीय पत्र

पूर्णांक 100

(क) स्मातोल्लास (प्रथम भाग)	40 अंक
(ख) प्रयोगिक परीक्षा प्रथम पत्र पर आवास्त	60 अंक

### या (13) पुराणेतिहास

पत्र संख्या                      ग्रन्थ                      पूर्णांक 100

#### प्रथम पत्र

(क) वाल्मीकीय रामायण सुन्दर काण्ड	50 अंक
(ख) भक्तिरसायन—मधुसूदन सरस्वतीकृत	50 अंक

#### द्वितीय पत्र

पूर्णांक 100

(क) महाभारत के आदि पर्व के 10 अध्याय	30 अंक
(ख) इन्द्र विजय मधुसूदन भा)	30 अंक
(ग) प्राचीनतम भारत का इतिहास (आदि काल से सातवीं शताब्दी तक)	40 अंक

#### सहायक ग्रन्थ —

1. प्राचीन भारत—आर. एस. पाण्डेय
2. प्राचीन भारत—राजवली पाण्डेय
3. प्राचीन भारत—आर. एस. त्रिपाठी
4. प्राचीन भारत का इतिहास—वा. ज. उपाध्याय
5. प्राचीन भारत का इतिहास—एन. पोष
6. पारिणितिकालीन भारतवर्ष—वा. ज. उपाध्याय

## या (14) आगम

पत्र संख्या                      ग्रन्थ                      पूर्णांक 100

## प्रथम पत्र

(क) त्रिपुरारहस्यम् राजखण्ड                      50 अंक

(ख) महार्थ मंजरी                      50 अंक

## द्वितीय पत्र

पूर्णांक 100

(क) ललितासहस्रनाम भाम्कर राय कृत  
भाष्य सहित                      50 अंक

(ख) विरूपाक्ष पंचाशिका                      50 अंक

## वर्ग (3) वैकल्पिक विषय

निम्नांकित में से कोई दो विषय ग्राह्य है—किन्तु क्र० सं० 12 व 13 में से छात्र कोई एक विषय ही ले सकेगा ।

## 1. हिन्दी साहित्य

इस विषय का 3 घण्टे की अवधि का एक प्रश्न पत्र होगा, जिसमें 100 पूर्णांक होंगे ।

इस पत्र में अंक विभाजन निम्न प्रकार रहेगा—

गद्य                      25 अंक

नाटक                      10 अंक

उपन्यास                      10 अंक

आलोचना व हिन्दी साहित्य का इतिहास                      30 अंक

निबन्ध                      25 अंक

योग 100 अंक

## पाठ्य ग्रन्थ

(1) त्रिवेणी—आचार्य रामचन्द्र शुक्ल

(2) अज्ञातशत्रु—जयशंकर प्रसाद

(3) गोदान—प्रेमचन्द

सहायक पुस्तकें :

- (1) हिन्दी साहित्य का सुबोध इतिहास
- (2) हिन्दी आलोचना के रूप-फूलचन्द्र पाण्डेय (गयाप्रसाद एण्ड सन्स)
- (3) प्रदम्ब प्रभाकर-जगन्नाथ प्रसाद ।
- (4) हमारे लेखक—राजेन्द्र सिंह
- (5) जयगंकर प्रसाद के नाटकों का शास्त्रीय अध्ययन-जगन्नाथ प्रसाद
- (6) हिन्दी साहित्य में निवन्ध-ब्रह्मदत्त शर्मा  
(नूतन संस्करण) (गया प्रसाद एण्ड सन्स)

## (2) अंग्रेजी साहित्य

इस विषय का तीन घंटों का 100 अंकों का एक प्रश्नपत्र होगा—  
अंकों का विभाजन निम्न प्रकार होगा:—

(अ) शेक्सपीयर एण्ड ड्रामा	30 अंक
(ब) बीसवीं सदी का नाटक	30 अंक
(स) उपन्यास	20 अंक
(द) फीगर्स आफ् स्पीच	20 अंक

1. अभिस्तावित पुस्तकें (विशेष अध्ययनार्थ)
  - (अ) मैकद्वैथ—शेक्सपीयर
  - (ब) आर्यस एण्ड दी मैन—जी० बी० जॉ०
2. सामान्य अध्ययनार्थ—उपन्यास—दी मेयर आफ् रेस्टर ब्रिज-टामस हार्डी
3. फीगर्स आफ् स्पीच—सिमली, मेटाफर, फेल्ल, आक्सोमोरन्, एन्टीथिसिस, एपीग्राम, पैराडॉक्स, ट्रान्सफर्ड, एपीलूट, क्लाइमेक्स, एन्टी क्लाइमेक्स, परसोनी फिकेशन, एपोस्ट्रोफी. हायपर बोला, आर्डरनीपर, लिटोटोमी ।

सहायक पुस्तकें

1. इंगलिश ग्रामर एण्ड कम्पोजीशन—जे० सी० नेस्फील्ड
2. हाईस्कूल इंगलिश ग्रामर एण्ड कम्पोजीशन—रेन एण्ड मार्टिन

## (3) एक विदेशीभाषा

जर्मन

एक प्रश्न पत्र 100 अंकों का होगा तथा समय 3 घंटे होगा । पत्र में अंक विभाजन निम्न प्रकार होगा—

(अ) जर्मन सम्यता का सर्वेक्षण-अभ्यासियों से अपेक्षा की जाती है कि वे ऊपर जर्मन में देंगे। निर्धारित पाठ्यपुस्तकों से सम्बद्ध जीर्णों पर आधारित 15 प्रश्नों में से 7 प्रश्न उत्तरणीय होंगे।	70 अंक
(ब) निबन्ध जर्मन में	30 अंक
	<hr/>
योग	100 अंक
	<hr/>

### निर्धारित पाठ्य पुस्तकें—

1. Harry Steinhaure. Read, Write, Speak, German Bautam language Lib. 1965. U.S. Dollars: 1.25
2. Harry Steinhaure, First German Reader Bantam language Lib. 1964: U.S. Dollars: O. 75

The courses should be arranged as follows:

1st Yr. Vol. a, pp 1-109

Vol. a, pp 109-209

2nd Yr. Vol. b, pp 1-26

3rd Yr. Vol. b, pp 26-225

### या फ्रेन्च

एक प्रश्नपत्र 100 अंकों का होगा तथा समय 3 घंटे का होगा। पत्र में अंक विभाजन निम्न प्रकार रहेगा—

(अ) निर्धारित पुस्तक की फ्रेन्च का संस्कृत या हिन्दी या अंग्रेजी में अनुवाद	40 अंक
(ब) संस्कृत या हिन्दी या अंग्रेजी से फ्रेन्च में अनुवाद	30 अंक
(स) निबन्ध (जर्मन में)	30 अंक
	<hr/>
योग	100 अंक
	<hr/>

### निर्धारित पाठ्यपुस्तक—

Masourin Dounds : Modern French Course  
(51—70 lessons)

### या रसियन

एक प्रश्न पत्र 100 अंकों का तथा समय 3 घंटे का होगा। पत्र में अंक विभाजन निम्न प्रकार रहेगा—

(अ) रसियन एन्ड सोवियत लिट्रेचर	55 अंक
(ब) रसियन में रचना	15 अंक
(स) संस्कृत या हिन्दी या अंग्रेजी से रसियन में अनुवाद	15 अंक
(द) रसियन से संस्कृत या हिन्दी या अंग्रेजी में अनुवाद	15 अंक
योग	100 अंक

### निर्धारित पाठ्यपुस्तकें —

1. Ministry of Education USSR (Ed.)  
Academy of Science USSR (Ed.)  
Russian and Modern Soviet Russian Literature.
2. C.N. Chakrawarty.  
Russian Literature.
3. A.N. Sokalov (Prof. Moscow Univ.)  
History of Russian--Soviet Literature (1963) :

### या परिसन

एक प्रश्नपत्र 100 अंकों का तथा समय 3 घंटे का होगा। पत्र में अंक विभाजन निम्न प्रकार रहेगा—

(अ) गद्य व पद्य के अवतरण का संस्कृत या हिन्दी या अंग्रेजी में अनुवाद व व्याख्या	50 अंक
(ब) गद्य व पद्य पर आधारित प्रश्न	20 अंक
(स) परिसियन साहित्य के इतिहास की रूपरेखा	15 अंक
(द) संस्कृत या हिन्दी या अंग्रेजी से परसियन में अनुवाद	15 अंक
योग	100 अंक

### निर्धारित पाठ्यपुस्तकें —

गद्य व पद्य —

Intekhabe Nagme-o-Nasa Farsi  
(For M. A. Urdu)



Edited by the Department of Urdu,  
Muslim University, Aligarh,  
Price Rs. 2/—

अभिस्ताविक पुस्तक---

Sherul Ajam Part I & II by Shibli Nomani

#### 4-इतिहास

इस विषय में निम्नलिखित दो प्रश्न पत्रों में से एक को लेना होगा,  
जिसका समय 3 घंटे व अंक 100 होंगे।

प्रश्नपत्र 1 आधुनिक योरोप का इतिहास (1815-1945)

अथवा

#### 2 भारत की संस्कृति का इतिहास

पाठ्यग्रन्थ—

(पद्य-1) मेहता-श्री० एन-आधुनिक योरोप भाग 2, 3 व 4  
(लक्ष्मीनारायण-आगरा)

2 शर्मा, जी० एन०-योरोप का इतिहास

(पद्य-2) 1 हरिदत्त वेदालंकार-भारतीय संस्कृति का इतिहास

2 डा० रामजी उपाध्याय-भारतीय संस्कृति का उत्थान  
(प्रकाशक रामनारायण लाल, इलाहबाद)

#### (5) राजनीति विज्ञान

इस विषय में तीन घण्टे की अवधि का 100 पूर्णांक का एक प्रश्न पत्र होगा।

प्राचीन राजनीति अथवा भारतीय राष्ट्रीय

आन्दोलन, संवैधानिक विकास व गणतंत्र का विधान

प्रश्न पत्र— प्राचीन राजनीति

100 अंक

- (1) प्राचीन भारतीय राजनीति दर्शन एवं संस्थाएँ।
- (2) नीति की परिभाषा, उपयोगिता, अन्य विषयों से संबंध।
- (3) राज्य की परिभाषा-उपांग, उत्पत्ति के विभिन्न सिद्धान्त।
- (4) राजा-राजा के लक्षण, राजा के वर्गीकरण, राजा का कर्तव्य,  
किन स्थितियों में राजा को राजपद से निरस्त किया जा सकता है।

- (5) मंत्री, मंत्री की उपयोगिता, मंत्रणा, मंत्रणा का प्रकार व स्थान, मंत्री परिपद, संगठन योग्यताएँ एवं कर्तव्य ।
- (6) गणतन्त्र, गणतन्त्र के लक्षण, गुण व दोष ।
- (7) प्राचीन भारतीय न्याय पद्धति ।
- (8) प्रमुख विचारकों का संक्षिप्त परिचय ।
- (9) गांधीवाद ।

ग्रन्थ—

- (1) महाभारत-शान्तिपर्व ।
- (2) मनुस्मृति-सप्तम अध्याय ।
- (3) शुक्रनीतिसार ।
- (4) कौटिल्य-अर्थशास्त्र ।
- (5) डायसवाल-हिन्दू पीलिटी ।
- (6) अल्वेकर-स्टेट एण्ड गवर्नमेन्ट इन इन्डिया ।
- (6) घोपाल-हिन्दू पोलिटिक्स थ्योरी ।
- (8) एच०एन० सिन्हा-सावरेण्टी एन एन्डिया ।

अथवा

प्रश्न पत्र—भारतीय राष्ट्रीय आन्दोलन, संवैधानिक विकास व भारतीय गणतन्त्र का संविधान :

ग्रन्थ—

- (1) वी०वी० रघुवंशी—भारतीय संविधान और शासन विकास ।
- (2) जे० के० गहराना—भारतीय राजनीति ।
- (3) के० एण्ड वर्मा—भारत का संविधान ।
- (4) मोहनलाल—भारतीय राष्ट्रपति और संविधान ।
- (5) जी०एन० सिंह—लैण्डमाक्स इन इण्डियन कांस्टीट्यूशन एण्ड नेशनल डेवलपमेन्ट (हिन्दी अनुवाद) ।
- (6) जे०पी० नूट —भारतीय राष्ट्रीय आन्दोलन व संवैधानिक विकास ।
- (7) एम०पी० जर्मा—भारतीय सरकार व राजनीति ।

## (6) अर्थशास्त्र

यह प्रश्नपत्र 100 अंकों का होगा जिसका समय 3 घण्टे होगा ।

प्रश्न पत्र—अर्थशास्त्र के सिद्धान्त

- (1) परिचय—अर्थशास्त्र की परिभाषा एवं विषय क्षेत्र, आर्थिक प्रणालियाँ, नियम तथा मान्यताएँ, आर्थिक विश्लेषण की रीतियाँ (आर्थिक व्यष्टिभाव तथा आर्थिक समष्टिभाव), आगमन तथा निगमन रीतियाँ ।
- (2) उपभोग—उपभोक्ता विकल्प तथा प्रभुसत्ता, उपभोग के नियम, आवश्यकताएँ एवं वर्गीकरण ।  
उपयोगिता विश्लेषण—ह्रास नियम, समसीमान्त उपयोगिता नियम, उपभोक्ता की देशी मांग का नियम, मांग की लोच, कुल एवं सीमान्त आगम, मांग की आय सापेक्षता ।
- (3) उत्पादन—उत्पादन के साधन, लक्षण, पूर्ति एवं कार्य कुशलता ।  
उत्पादन लागत व प्रतिफल के नियम—ह्रासमान, स्थिर एवं वर्धमान प्रतिफल के नियम, जनसंख्या के मात्स्य एवं इष्टतम जनसंख्या सिद्धान्त ।
- (4) विनिमय—मुद्रा प्रकृति कार्य एवं महत्व, मुद्रा के मूल्य का निर्धारण परिमाण सिद्धान्त, मुद्रा के मूल्य में परिवर्तन-निर्देशांक, प्रमुख मुद्रामान-स्वर्णमान के विशेष सन्दर्भ में ।  
बैंक—परिभाषा कार्य, व्यवसायिक एवं केन्द्रीय बैंक के कार्य ।  
मण्डी—परिभाषा, वर्गीकरण एवं मण्डी का विस्तार, मांग पूर्ति विश्लेषण व साम्य कीमतों का निर्धारण ।  
पूर्ण प्रतियोगिता, अपूर्ण प्रतियोगिता, एकाधिकार, अल्पाधिकार का अन्तर, व्यक्तिगत फर्म एवं सम्पूर्ण उद्योग के कीमत एवं उत्पादन की मात्रा की संतुलन की अवस्था । पूर्ण प्रतियोगिता की अवस्था में अल्पकालीन एवं दीर्घकालीन कीमतों का निर्धारण ।
- (5) वितरण—राष्ट्रीय लाभांश, वितरण का सीमान्त उत्पादित सिद्धान्त ।  
लगान, व्याज, मजदूरी, लाभ का निर्धारण (आधुनिक सिद्धान्तों के विशेष सन्दर्भ में) ।
- (6) राजस्व—प्रकृति एवं महत्व, कर-करों के सिद्धान्त, प्रत्यक्ष एवं परोक्ष कर ।
- (7) अन्तराष्ट्रीय व्यापार व विदेशी विनिमय—मुक्त व्यापार एवं संरक्षण, भुगतान संतुलन, विदेशी विनिमय दरों का निर्धारण ।

पाठ्य पुस्तकें—

- (1) सुन्दरम् एवं वैश्य—अर्थशास्त्र के सिद्धान्त-प्रकाशक रतन प्रकाशन मन्दिर, आगरा-3
- (2) वैश्य—मुद्रा की रूपरेखा-रतन प्रकाशन मन्दिर, आगरा-3 ।
- (3) स्टोइनर एण्ड हैग—ए टेक्सट बुक आफ इकोनोमिक थ्योरी (अंग्रेजी हिन्दी दोनों में)
- (4) ग्योफर ग्राउयर—एन आउटलाइन ओफ मनी (अंग्रेजी हिन्दी दोनों में)
- (5) डेक्शन—पब्लिक फाईनेन्स (अंग्रेजी हिन्दी दोनों में)

सहायक ग्रन्थ—

- (1) विजयेन्द्रपाल सिंह—अर्थशास्त्र के सिद्धान्त-नवयुग साहित्य सदन, आगरा-2
- (2) विजयेन्द्रपाल सिंह—मुद्रा बैंकिंग व राजस्व-नवयुग साहित्य सदन, आगरा-2
- (7) सांख्यिकी

इस तिथि में तीन घण्टे की अवधि का 100 पूर्णांक का एक प्रश्नपत्र होगा ।

The candidates can offer any three of the following topics with the permission of the Head of the Department concerned. The marks in this paper will be equally distributed on each of the three topics offered.

- (a) Design of Experiments.
- (b) Sample Surveys.
- (c) Quality Control.
- (d) Economic Statistics.
- (e) Vital Statistics.
- (a) *Design of Experiments*—Analysis of Variance and Transformations. Randomisation, replication, Local and Statistical control, size and shape of experimental unit. Uniformity trials, completely. Randomised, Randomised block and Latin square Designs.
- (b) *Sample Surveys*—Sampling system, Simple random, stratified, cluster, two-stage, systematic, regression and ratio

estimates (without derivation of various formulae except in simple random sampling.

- (c) *Quality Control*—Concept of quality control, standard quality, specifications, control charts (X, R, and C) their uses.
- (d) *Economic Statistics*—Present statistical system in India, Agriculture, income and industrial statistics in India. Index Numbers, meaning and uses, construction of index numbers fixed base and chain base, calculation of indices of prices and cost of living, Fishers ideal index numbers.
- (e) *Vital Statistics*—Birth and death rates. Measurement of fertility, reproduction rates. Census organisation. Distribution of population according to age, sex, occupation etc. Life table and its uses. Birth, death, marriage and migration statistics in India.

*Book recommended :*

1. Panse, V.G. and Sukhatme, P.V.—Statistical Methods for Agricultural Research.
2. Cochran and Cox—Experimental Designs.
3. Sukhatme P. V.—Sampling Theory of Surveys with applications.
4. Burr—Quality control.
5. Barclay—Population Techniques.
6. Elhance, D. N.—Indian Statistics.
7. Croxton and Cowden—Applied General Statistics.

(३) लोक प्रशासन

इस विषय में 3 घण्टे का तथा 100 प्रश्नों का एक प्रश्न पत्र होगा :

प्रश्न पत्र—लोक प्रशासन के तत्त्व

हमारे समाज में लोक प्रशासन का बहुत बड़ा महत्त्व, एक स्वतन्त्र अनुशासन के रूप में लोक-प्रशासन । लोक प्रशासन व अन्य व्यावहारिक समाज-विज्ञान ।

प्रशासन के सिद्धान्त—आदेश, कार्यकर्ता व उनकी श्रेणी, अवरोह-वन (हायरआर्की), नियंत्रण की अवधि, प्रतिनिधित्व व सहयोग की एकलपदा ।

वैयक्तिक व्यवस्था के सिद्धान्त—नियुक्ति, वर्गीकरण, प्रशिक्षण, संरचना, पदोन्नति, अनुशासनात्मक कार्यवाही, सेवानिवृत्ति-लाभ ।

वित्तीय प्रशासन—वजट के तत्व, वजट तैयार करना, वजट पर विधान सभा की (वैधानिक) कार्यवाही । लोक-लेखा समिति, आंकला समिति, नियंत्रक तथा आडिट पर्यवेक्षक (आडिटर जनरल) ।

लोक प्रशासन का नियंत्रण—प्रशासनिक व न्यायालयीय नियंत्रण ।

अभिस्तावित पुस्तकें—

- (1) ग्लेडन : एशेंशयल्स आफ पब्लिक एडमिनिस्ट्रेशन ।
- (2) शर्मा : पब्लिक एडमिनिस्ट्रेशन-थ्योरी एण्ड प्रैक्टिस ।
- (3) अवस्थी एवं माहेश्वरी : पब्लिक एडमिनिस्ट्रेशन ।
- (4) सी०पी० भाम्बरी : पब्लिक एडमिनिस्ट्रेशन ।

### (9) मनोविज्ञान

पत्र सं०		पूर्णांक
(1)	आधुनिक मनोविज्ञान	100

सहायक पुस्तकें—

- (1) प्रो० राम कुमार राय — असामान्य मनोविज्ञान
- (2) मारगन एण्ड जिकिलेण्ड— मनोविज्ञान
- (3) जगदानन्द पाण्डे — मनोविज्ञान परिचय
- (3) वाई० मशीह — सामान्य मनोविज्ञान
- (5) मफी — साइकोलाजी व्रीफर कोर्स
- (6) बुडवर्थ — साइकोलाजी

### (10) समाजशास्त्र

इस विषय का 100 पूर्णांक तथा 3 घण्टे के समय का एक प्रश्न पत्र होगा ।

प्रश्नपत्र—सामाजिक सर्वेक्षण

- (अ) सामाजिक सर्वेक्षण का आशय तथा प्रकृति, सामाजिक-सर्वेक्षण कार्य-सिद्धान्तों का नियोजन व क्रियान्विति, वस्तु विचरण तथा सर्वेक्षण के कारण ।
- (ब) सामाजिक सर्वेक्षण की विधियां, पूर्व परीक्षण (प्रि-टेस्टिंग), नमूना बनाना (सैम्पलिंग), विस्तृत-सर्वेक्षण, पाइलाट सर्वेक्षण)

(स) अनुसूची, प्रश्नावली, साक्षात्कार तथा निरीक्षण ।

(द) प्रदत्त आंकड़ों, लेखाचित्रों, चार्टस् और ड्राई'ग्स (रेखाचित्रों) का प्रस्तुतिकरण ।

अभिस्तावित पुस्तकें—

पी०वी० युंग—साइन्टिफिक सोशियल सर्वे एण्ड रिसर्च ।

### (11) गृह विज्ञान

इस विषय में एक पत्र 3 घण्टे की अवधि तथा 100 पूर्णांक का होगा ।

प्रश्नपत्र—आहार तथा पोषण

(1) शक्ति चयापचय

(2) आहार व्यवस्था

(3) सन्तुलित भोजन

(4) खाद्य पदार्थ संरक्षण

(5) अच्छे पोषण का तात्पर्य

(६) चिकित्सा सम्बन्धी पोषण

(7) विशिष्ट वैयक्तिक आवश्यकताओं के सन्दर्भ में आहार नियोजन ।

इन शीर्षों के लिए स्तरानुकूल यथेच्छ पुस्तकों से सहायता ली जा सकती है ।

### (11) फलित ज्योतिष (प्रायोगिक सहित)

पत्र सं०	ग्रन्थ	पूर्णांक
(1)		100
	(क) केशवीजातक पद्धति	30
	स्त्रीजातक	20
	(ख) प्रायोगिक परीक्षा, विशिष्ट जन्म पत्र निर्माण, केशवीजातक पद्धति के बलावल और आयु विचार तथा जन्म पत्र भाव फलोद्देश	50

### (13) सामान्य पौरोहित्य (प्रायोगिक सहित)

पत्र सं०	ग्रन्थ	पूर्णांक
(1)		100
	(क) कुण्ड मण्डप सिद्धि	20
	शान्ति मयूख अथवा	30
	शान्तिसार	

- (ख) प्रायोगिक परीक्षा 50  
(पाठ्यक्रम पर आधारित)  
(क भाग की)

(14) भाषा विज्ञान तथा संस्कृत भाषा का इतिहास

प्रथम पत्र

संस्कृत भाषा का इतिहास 100

सहायक ग्रन्थ—

- (1) संस्कृत भाषा का इतिहास—डा० धर्मेन्द्रशास्त्री एम. ए.  
(2) संस्कृत भाषा का शास्त्रीय अध्ययन—डा० भोला जंकर व्यास

संस्कृत संकाय

आचार्य (पूर्वाध तथा उत्तरार्ध) परीक्षा का पाठ्यक्रम तथा पाठ्य पुस्तकें

1972-1973

आचार्य परीक्षा में 8 प्रश्नपत्र होंगे। प्रत्येक प्रश्नपत्र का समय तीन घंटे का होगा। आठ प्रश्नपत्रों में से तीन (प्रथम, द्वितीय तथा तृतीय) प्रश्न पत्र अनिवार्य होंगे। इसके अतिरिक्त शेष पांच (चतुर्थ, पंचम, षष्ठ, सप्तम तथा अष्टम) पत्र के वैकल्पिक विशिष्ट विषय होंगे, जिनमें अष्टम प्रश्नपत्र (जो विशिष्ट विषय अर्थात् स्वशास्त्र के आलोचनात्मक अध्ययन, व्युत्पत्ति इतिहास, निबन्ध अथवा प्रायोगिक का होगा) उत्तरार्ध परीक्षा में ही ग्राह्य होगा और शेष सात प्रश्नपत्रों में यद्येच्छ कोई चार पूर्वार्ध परीक्षा में तथा शेष तीन उत्तरार्ध परीक्षा में ग्राह्य होगा। प्रत्येक प्रश्नपत्र का समय तीन घंटों का होगा व प्रत्येक प्रश्नपत्र के पूर्णांक 100 होंगे।

अनिवार्य

प्रथम पत्र : वैदिक साहित्य तथा तुलनात्मक भाषा विज्ञान पूर्णाङ्क 100

इस पत्र में अंक विभाजन निम्न प्रकार रहेगा :—

- |     |                           |        |
|-----|---------------------------|--------|
| (अ) | 2. वेद                    | 35 अंक |
|     | 2. निरुक्त                | 15 अंक |
| (ब) | 1. भाषा विज्ञान           | 35 अंक |
|     | 2. संस्कृत भाषा का इतिहास | 15 अंक |

(अ) वैदिक साहित्य

1. ऋणाष्य संग्रह—देवराज चानना

(प्रकाशक मुंजीराम मनोहर लाल, नई सड़क, नई दिल्ली-6)



(8, 11, 12, 14, 15, 16, 19, 20, 22, 23, 25, 26, २९  
31. तथा 33 सूक्त रहित)

## 2. यास्क्रीय निरुक्त अध्याय 1

वैदिक व्याकरण के लिये निम्न पुस्तकें अनुशंसित है:—

वैदिक व्याकरण

लेखक उमेश चन्द्र पांडेय

वेदन लावण्यम्

डा० सुधीर कुमार गुप्त

प्रकाशक भारतीय मंदिर अनुसंधानशाला, आर-2  
विश्वविद्यालय पुरी, जयपुर ।

## (व) तुलनात्मक भाषा विज्ञान के तत्व

सामान्य वर्णन, क्षेत्र, ध्वनि, यन्त्र की रचना, ध्वनि सम्बन्धी, नियम,  
भाषाओं का वर्गीकरण भारत-यूरोपीय भाषा परिवार के वशिष्ट  
संदर्भ सहित ।

निर्धारित पाठ्यक्रम

गुरो-एन इन्ट्रोडक्शन टू कम्परेटिव फिलौलोजी (हिन्दी संस्करण) वट  
कृष्ण पोष-लिग्विस्टिक इन्ट्रोडक्शन टू संस्कृत

(इण्डियन रिसर्च इन्स्टीट्यूट मानिक तल्ला गली कलकत्ता)

डा० मंगलदेव शास्त्री-तुलनात्मक भाषा शास्त्र

भोलानाथ तिवारी-भाषा विज्ञान

डा० भोला शंकर व्यास-संस्कृत का भाषा शास्त्रीय अध्ययन

(भारतीय ज्ञानपीठ काशी मूल्य 5/-)

अथवा

प्रथम पत्र :

संस्कृत साहित्य तथा तुलनात्मक भाषा विज्ञान पूर्णाङ्क 100  
इस पत्र में अंक विभाजन निम्न प्रकार का रहेगा :—

(अ)	1. संस्कृत साहित्य, गद्य, पद्य	30 अंक
	2. नाटक	20 अंक
(व)	1. भाषा विज्ञान	35 अंक
	2. संस्कृत भाषा का इतिहास	15 अंक

संस्कृत भाषा का इतिहास-प्रो० धर्मेन्द्र नाथ शास्त्री  
डी वारो-दी संस्कृत लैंग्वेज ।

(प्र) संस्कृत साहित्य

1. विह्वलण : विक्रमांकदेवचरितम् 12 सर्ग
2. जयदेव विद्यालंकार : उत्कीर्ण लेखार्जलि
3. विस्ताराका दत्त : मुद्रा राक्षस

(व) तुलनात्मक भाषा विज्ञान के तत्त्व

ज्ञानान्तर दर्शन, क्षेत्र, ध्वनि यंत्र की रचना ध्वनि सम्बन्धी नियम भारतीय-यूरोपीय भाषा परिवार के विशिष्ट संदर्भ सहित भाषा और वर्गीकरण ।

निर्धारित पाठ्यग्रन्थ :

एन इन्ट्रोडक्शन टु कम्परेटिव फिलोलोजी (हिन्दी संस्करण)

बदा कृष्ण पोष : लिग्विष्टिक इन्ट्रोडक्शन टु संस्कृत

(इन्डियन रिसर्च इन्स्टीट्यूट 170, नानिक तला गली, कलकत्ता)

डा० मंगलदेव शास्त्र : तुलनात्मक भाषा शास्त्र

भोलानाथ तिवारी : भाषा विज्ञान

डा० भोला शंकर व्यास : संस्कृत का भाषा शास्त्रीय अध्ययन

(भारतीय ज्ञानपीठ काशी, मूल्य 5/-)

तारापोरवाला : इलेमेन्ट आफ दी साइन्स आफ लैंग्वेज

सीताराम चतुर्वेदी : भाषा शास्त्र

प्रो० बनेन्द्र नाथ शास्त्री—संस्कृत भाषा का इतिहास टी वरो दी संस्कृत लैंग्वेज

टिप्पणी : वैकल्पिक विशिष्ट विषय के अन्तर्गत वेद, (ऋग्वेद, यजुर्वेद, सामवेद, अथर्ववेद) विषय को लेने वाले उक्त प्रथम पत्र में संस्कृत साहित्य तथा भाषा विज्ञान, विषयक पत्र ही लेंगे । वेद के अतिरिक्त अन्य विषय अर्थात् व्याकरण, साहित्य, ज्ञानान्तर दर्शन, वेदान्त, नीतिशास्त्र, न्याय, ज्योतिष, जैन दर्शन, बौद्ध दर्शन, पौराणिक, वर्मशास्त्र, पुराणतिहास, वास्तु तथा जिल्म आगम तथा तंत्र विषय लेने वाला उक्त प्रथम पत्र में वैदिक साहित्य तथा भाषा विज्ञान विषयक पत्र ही लेंगे ।

## द्वितीय पत्र

पूर्णाङ्क 100

प्राचीन भारत का साहित्यिक तथा सांस्कृतिक इतिहास :—इस पत्र में अंक विभाजन निम्न प्रकार रहेगा—

वैदिकसाहित्य का इतिहास	25 अंक
लौकिक संस्कृत साहित्य का इतिहास	35 अंक
सांस्कृतिक इतिहास	40 अंक

इस पत्र में निम्न शीर्षक अध्ययनार्थ निर्दिष्ट हैं—

## (अ) साहित्यिक इतिहास—

1. वैदिक साहित्य : संहिता ब्राह्मण, बारण्यक, उपनिषद् तथा सूत्र
2. रामायण महानारत, पुराण साहित्य
3. काव्य (महाकाव्य, वेद काव्य, मुक्तक, ऐतिहासिक काव्य)
4. नाट्य साहित्य
5. गद्य काव्य कल चम्पू कथा आख्यायिका परिकथाएँ
6. दर्शन साहित्य
7. धर्मशास्त्र तथा अर्थशास्त्र
8. काव्य शास्त्र
9. वैज्ञानिक साहित्य
10. लोक कथायें तथा नीति कथायें ।

## (ब) सांस्कृतिक इतिहास

1. भारत की संस्कृति तथा इतिहास (ऋग्वेद काल से पूर्व 400 तक चार सौ)
1. प्राचीन भारत के स्मारक (मौर्यकाल से 1200 ई० तक)
3. भारत का औपनिवेशिक तथा सांस्कृतिक विस्तार

## निर्धारित पाठ्य ग्रन्थ :

1. विन्टर नित्ज : हिस्ट्री आफ इन्डियन लिटरेचर, बोल्यूम 1
2. कोथ : हिस्ट्री आफ संस्कृत लिटरेचर
3. एस. के. डे तथा दास गुप्ता : हिस्ट्री आफ क्लासीकल संस्कृत लिटरेचर
4. आर. के. मुकर्जी : हिन्दू सभ्यता, अनुवादक वासुदेव जरण अग्रवाल  
(प्रकाशक भारतीय विद्या भवन, दम्बई मूल्य 20/-)

5. कीय : संस्कृत ड्रामा

6. कैम्ब्रिज हिस्ट्री आफ इन्डिया वोल्यूम 1 (केवल अव्ययन 2 से 10 तथा 26वां)

### सन्दर्भ-ग्रन्थ —

1. बलदेव उपाध्याय : वैदिक साहित्य और संस्कृति  
(गारदा मंदिर, गणेश दीक्षित, काशी)  
मूल्य 5-50
2. " " : संस्कृत साहित्य का इतिहास  
(गारदा मन्दिर काशी)
3. मैकडानल : इन्डियाज पास्ट
4. डा. रामजी उपाध्याय : संस्कृत साहित्य का आलोचनात्मक  
इतिहास  
प्रकाशक : रामनारायण लाल बेनीमावद, इलाहा-  
बाद मूल्य 10/-
5. डा. रामजी उपाध्याय : भारतस्य सांस्कृतिक विधि,  
प्रकाशक : सागर विश्वविद्यालय, सागर  
मूल्य 10/-
6. वाचस्पति मेरोला : संस्कृत साहित्य का इतिहास

### तृतीय पत्र

पूर्णांक 100

भारतीय धर्म एवं दर्शन

इस पत्र में अङ्क विभाजन निम्न प्रकार रहेगा ।

धर्म	30 अङ्क
दर्शन (सांख्य, न्याय वेदान्त, चार्वाक, बौद्ध तथा जैन)	70 अङ्क

### पाठ्य ग्रन्थ—

1. याज्ञवल्क्य स्मृति (आचाराध्याय) गृहस्य धर्म  
प्रकरणांत 30 अङ्क
2. न्याय मुक्तावलि प्रत्यक्ष सङ्कांक 40 अङ्क
3. सांख्याकारिका 30 अङ्क

## अथवा

## तृतीय पत्र

पूर्णांक 100

संस्कृत साहित्य :—इस पत्र में अंकविभाजन निम्न प्रकार रहेगा—

संस्कृत साहित्य (गद्य, पद्य)	50 अङ्क
नाटक	25 अङ्क
पाली तथा प्राकृत	25 अङ्क

## पाठ्य ग्रन्थ—

1. विह्वलण विक्रमाकदेवचरितम् (1 व 2 सर्ग)
2. जयदेव विद्यालंकार : उत्कीर्णलेखांजलि
3. विशाखदत्त : मुद्राराक्षस
4. धर्मपदेम संग्रह : यमकवग्ग तथा अण्पमादवग्ग ( सम्पायक प्रो० एन. के. भागवत प्रकाशक—बुद्ध सोसायटी आनंद विहार, लेमिग्टन रोड, बम्बई)

5. पाली प्राकृत अपभ्रंश संग्रह : पांडेय व मिश्र चौ. स. वाराणसी

## टिप्पणी—

वैकल्पिक विशिष्ट के अन्तर्गत सामान्य दर्शन, न्याय, वेदान्त, मीमांसा, जैन दर्शन, बौद्ध दर्शन, धर्मशास्त्र, विषय लेने वाले उक्त तृतीय पत्र में संस्कृत साहित्य विषय पत्र ही लेगे। वेद, व्याकरण, साहित्य, ज्योतिष, पौरोहित्य, पुराणेतिहास, वास्तु तथ्य शिल्प, आगम तथा तन्त्र विषय लेने वाले उक्त तृतीय पत्र में भारतीय धर्म एवं दर्शन विषयक पत्र ही लेंगे।

## वैकल्पिक विशिष्ट विषय—

निम्नांकित विषयों में से कोई एक विषय ग्राह्य होगा, जिसके पांच (चतुर्थ, पंचम, षष्ठ, सप्तम तथा अष्टम) प्रश्नपत्र होंगे। प्रत्येक प्रश्नपत्र के पूर्णांक 100 होंगे। अष्टम पत्र आचार्य (उत्तरार्द्ध) परीक्षा में ही ग्राह्य होगा।

(1) ऋग्वेद (प्रायोगिक सहित)

पत्र संख्या	ग्रन्थ	पूर्णांक 100
चतुर्थः	(क) ऋक्संहिता—प्रथम मंडल के 50 सूक्त	25
	(ख) ऋग्वेद भाष्य भूमिका	25
	(ग) जेमिनीय न्यायमाला 1 अध्याय	25
	(घ) निहक्त (देवत कांड)	25

पंचम पत्र

(क) ऋक्संहिता सप्तम मंडल के 20 सूक्त तथा नवम मंडल सायण भाष्य सहित 70 अंक	
(ख) ऋग्वेद प्रातिशाह्य (1 से 5 अध्याय )	30 अंक

षष्ठ पत्र

(क) ऐतरेय ब्राह्मण—आरम्भ (10 अध्याय तक)	60 अंक
(ख) ऐतरेयोपनिषद् समाख्य	20
(ग) कोशितरी उपनिषद्	20

अथवा

वेदविज्ञानम्—

(क) विज्ञान-विद्युत छन्दोन्यस्ता	15 अंक
(ख) शारीरिक विज्ञानम्	30 अंक
(ग) शारीरिक विमर्श	25 अंक
(घ) ब्रह्मसिद्धान्त	30 अंक

अथवा

(क) श्रोतपदार्थ निर्वचन	40 अंक
(ख) ऐतरेयालोचनम् सत्त्वव्रत सामश्रमी	30 अंक
(ग) स्मार्तोल्लास प्रथम भाग	30 अंक

सप्तम पत्र

(क) स्वशास्त्रीय निबन्ध	35 अंक
(ख) वेद साहित्य का आलोचनात्मक इतिहास	35 अंक
(ग) देवशास्त्र (माइयलोजी) का आलोचनात्मक अध्ययन	30 अंक

### सहायक पुस्तकें—

1. वैदिक साहित्य और संस्कृति—वलदेव उपाध्याय
2. हिस्ट्री आफ इन्डियन लिट्रेचर—विण्टरनिट्ज वोल्यूम 1
3. हिस्ट्री आफ संस्कृत लिट्रेचर—ए. बी. कीथ, (अनुवाद डा. मंगलदेव शास्त्री)
4. ऋग्वेदिक कल्चर—ए. सी. दास
5. वैदिक इन्डिया—डा. एल रेनारेन्ड
6. इन्डियाज पास्ट—मैकसमूलर
7. वेदरहस्य—श्री अरविन्द
8. काव्यापन श्रोत सूत्र भाष्य भूमिका—विद्याधर शास्त्री
9. वैदिक माइथालोजी—मैकडानल (अनुवाद—प्रो० रामकुमार राय भूमिका सहित)
10. वैदिक माइथालोजी—मैकडानल (अनुवाद—डा० सूर्यकान्त)

### अष्टम पत्र

- |  |        |
|--|--------|
| (क) आश्वलायन श्रोत सूत्र आरम्भ से सोमयाग<br>प्रकरवात | 40 अंक |
| (ख) प्रायोगिक सौमिक होत्र प्रयोग                     | 60 अंक |

अथवा

- (ख) लघु प्रबन्ध

### लघु प्रबन्ध नियम

1. जो अभ्यर्थी शास्त्री परीक्षा के पूर्णांकों में 48 प्रतिशत अथवा वैकल्पिक मुख्य विषय के अन्तर्गत ग्रहित विषय में 60 प्रतिशत अंक प्राप्त करेंगे, अथवा आचार्य (पूर्वार्द्ध) परीक्षा में 55 प्रतिशत अंक प्राप्त करेंगे। उन्हें अष्टम पत्र के अन्तर्गत आचार्य (उत्तरार्ध) परीक्षा में संस्कृत माध्यम में वैकल्पिक विशिष्ट विषय पर आधारित उच्चतर तथा लघु निबन्ध लिखने की अनुमति दी जाएगी।
2. लघु प्रबन्ध विषयक पत्र लेने की अनुमति केवल महाविद्यालयीय अभ्यासियों को ही दी जायेगी।

3. लघु प्रबन्ध किसी निर्देशक के निर्देशन में ही लिखा जायेगा । यह निर्देशक या तो किसी महाविद्यालय के अविस्नातक (पोस्ट ग्रेजुएट) विभाग का प्राचार्य/आचार्य होगा अथवा प्राचार्य द्वारा निर्वाचित वह वरिष्ठ प्राध्यापक होगा जो अविस्नातक (पोस्ट ग्रेजुएट) कक्षाओं को अध्ययन कराता हो ।
4. निर्देशक प्राचार्य/आचार्य पांच अभ्यर्थियों से अधिक एक समय में नहीं ले सकेंगे तथा निर्देशक दो अभ्यर्थियों से अधिक एक समय में नहीं ले सकेंगे ।
5. लघु प्रबन्ध के विषय का निर्धारण सम्बद्ध महाविद्यालय के प्राचार्य सम्बद्ध विषय के आचार्य की सहमति से 30 जुलाई तक करेंगे ।
6. किसी महाविद्यालय के अभ्यर्थियों द्वारा ग्रहित विषयों की सूची संस्कृत संकाय के अन्तर्गत अध्ययन मंडल के संयोजक को 20 जुलाई तक प्रेषित की जायेगी । जो यह देखेगा कि किसी लघु प्रबन्ध के शीर्षक की आवृत्ति तो नहीं हो रही है । यदि एक ही विषय (लघुप्रबन्ध का शीर्षक) एक से अधिक अभ्यर्थियों द्वारा ग्रहित किया गया हो तो जिसकी सूचना पहले प्राप्त होगी उसे ही उस विषय पर लघु प्रबन्ध लिखने की अनुमति दी जायेगी । लघु प्रबन्ध के विषयों का निर्णय अन्तिम समय से ढेर से ढेर 31 जुलाई तक हो जाना चाहिये तथा इसकी सूचना संकाय के अन्तर्गत अध्ययन मण्डल के संयोजक द्वारा सम्बद्ध महाविद्यालय के प्राचार्य/आचार्य व अभ्यर्थी को 31 जुलाई तक प्रेषित कर दी जानी चाहिये ।
7. लघु प्रबन्ध टंकित फुलस्केप आकार के 75 पृष्ठों से न्यून और 150 पृष्ठों से अधिक नहीं होगा ।
8. अभ्यर्थी परीक्षा से पूर्व 15 मार्च तक अपने निर्देशक द्वारा अग्रेसरित लघु प्रबन्ध की तीन प्रतियां महाविद्यालय के प्राचार्य द्वारा कुलसचिव को प्रेषित करेगा ।
9. लघु प्रबन्ध दो बाह्य परीक्षकों द्वारा जांचा जाएगा यदि दोनों परीक्षकों में मतभेद होगा तो दोनों परीक्षकों के द्वारा प्रदत्त अंकों का योग लेकर उनका औसत ग्रहण किया जायेगा ।



10. निर्देशक द्वारा एक घन्टा प्रति सप्ताह प्रति अन्यर्था लघु प्रबन्ध के लिए दिया जायेगा । तथा उपस्थिति नियमित रूप से अंकित की जायेगी ।

या (1) शुक्ल यजुर्वेद (प्रायोगिक सहित)

पत्र संख्या                      ग्रन्थ                      पूर्णांक 100

चतुर्थ पत्र

- (क) शुक्ल यजुः संहिता 1 से 10 अध्याय उव्वट  
भाष्य सहित                      50 अंक
- (ख) जैमिनी न्यायमाला 1 अध्याय                      25 अंक
- (ग) निरुक्त देवत कांड                      25 अंक

पंचम पत्र

- (क) शुक्ल यजुः संहिता 11 से 18 अध्याय  
उव्वट भाष्य सहित                      50 अंक
- (ख) कात्यायन शुल्क सूत्र                      25 अंक
- (ग) कात्यायन श्रौत सूत्र परिभाषा अध्याय                      25 अंक

षष्ठ पत्र

- (क) कात्यायन श्रौत सूत्र—द्वितीय अध्याय  
से सोमयागान्त सरलावृत्ति म. . स.  
विद्यावर गौड कृत सहित                      60 अंक

- (ख) कात्यायन प्रातिशाख्य 1 से 4 अध्याय                      40 अंक

अथवा

- (क) यज्ञतत्त्व प्रकाश                      25 अंक
- (ख) ईशावास्योपनिषद्                      25 अंक
- (ग) बृहदारण्यकोपनिषद्                      25 अंक
- (घ) स्मार्तोल्लालस प्रथम भाग                      25 अंक

अथवा

- (क) विष्णुयाग पद्धति                      25 अंक
- (ख) होमात्मक विष्णुयाग प्रयोग  
लेखक—दोलतराम गौड                      25 अंक

## अथवा

विष्णुयाग प्रयोग

लेखक—कायुतन्दन मिश्र

(ग) श्रोतावान पद्धति 25 अंक

(कात्यायन श्रोत सूत्र देवयानिक  
भाषानुसार)

(घ) जतपथ ब्राह्मण 1 से 4 अध्याय 25 अंक

पत्र संख्या ग्रन्थ पूर्णांक 100

## सप्तम पत्र

(क) स्वशास्त्रीय निबन्ध 35 अंक

(ख) वेदसाहित्य का आलोचनात्मक इतिहास 35 अंक

(ग) देवशास्त्र (माइयालोजी) का आलो  
चनात्मक अध्ययन 30 अंक

सहायक पुस्तकें—ऋग्वेदवद्

## अष्टम पत्र

(क) श्रोतपदार्थ निर्वचन 40 अंक

(ख) प्रायोगिक परीक्षा

1. हवनात्मक महारुद्र प्रयोग

—श्री दुर्गाशंकर शास्त्री बम्बई कृत

2. कात्यायन श्रोत सूत्र देवयानिक पद्धति

के अनुसार श्रोता वान प्रयोग ।

## अथवा

(ख) लघु प्रबन्ध

या (1) सामवेद (प्रायोगिक सहित)

पत्र संख्या ग्रन्थ पूर्णांक 100

## चतुर्थ पत्र

(क) सामसंहिता सायण भाष्य सहित एन्द्र  
पर्यान्त 50 अंक

- (ग) विरुक्त देवत कांड 25 अंक  
 (ग) जैमिनीय न्यायमाला 1 अध्याय 25 अंक

## पंचम पत्र

- (क) नामविधान ब्राह्मण 1 प्रपाठक सभाप्य 50 अंक  
 (ख) पड्विश्वनाह्मण 1 प्रपाठक सभाप्य 50 अंक

## षष्ठ पत्र

- (क) तान्डव महा ब्राह्मण प्रथम पंचिका 50 अंक  
 म. म. चित्रस्वामीकृत भूमिका से सहित  
 (ख) लाट्यायन श्रोत सूत्र अदि से 3 प्रपाठक 50 अंक

अथवा

- (क) जान्दोग्य उपनिषद् सभाप्य 25 अंक  
 (ख) कैन उपनिषद् सभाप्य 25 अंक  
 (ग) अग्निष्टोम साम (सत्यव्रत सामश्रमी  
 संकलित क. ल. ए. सोसायटी से प्राप्त 50 अंक

## सप्तम पत्र

ग्रन्थ

पूर्णांक 100

- (क) स्वशास्त्रीय निबन्ध 35 अंक  
 (ग) वेद साहित्य का आलोचनात्मक इतिहास 35 अंक  
 (ग) देव शास्त्र (माइथोलोजी) का आलोचना-  
 त्मक अध्ययन 30 अंक

सहायक पुस्तकें—ऋग्वेदवत्

## अष्टम पत्र

- (क) श्रौत पदार्थ निर्वचन 40 अंक  
 (ख) प्रायोगिक परीक्षा 60 अंक

(अग्निष्टोम पद्धति से श्रौतगाम प्रयोग,  
 विष्णुमाग, रुद्रकुण्ड, मण्डपजम)

अथवा

- (ख) लघु प्रबन्ध

या (ग) अथर्ववेद (प्रयोगिक सहित)

पत्र संख्या ग्रन्थ पूर्णांक 100

चतुर्थ पत्र

(क) अथर्ववेद संहिता 3, 4 कांड सांयरा	
भाष्य सहित	40 अंक
(ख) ऋग्वेद भाष्य भूमिका	20 अंक
(ग) जैमिनीय न्याय माला 1 अध्याय	20 अंक
(घ) निरुक्त देवत कांड	20 अंक

पंचम पत्र

(क) अथर्ववेदन संहिता 5 से 7 काण्ड सांयरा	
भाष्य सहित	50 अंक
(ख) अथर्व संहिता 1, 2 काण्ड सभाष्य	
भूमिका सहित	50 अंक

षष्ठ पत्र

(क) गोपथ ब्राह्मण	50 अंक
(ख) मंडुकोपनिषद् सभाष्य	20 अंक
(ग) प्रश्नोपनिषद् सभाष्य	30 अंक

सप्तम पत्र

(क) स्वशास्त्रीय निबन्ध	35 अंक
(ख) वेद साहित्य का आलोचनात्मक इतिहास	35 अंक
(ग) वेद शास्त्र (माइयालोजी) का आलोचना- त्मक अध्ययन	30 अंक

सहायक पुस्तकें—ऋग्वेदवत्

अष्टम पत्र

(क) श्रौतपदायं निर्वचन	40 अंक
(ख) प्रायोगिक परीक्षा	60 अंक
(राज्य प्रथमाभिषेक, अथर्ववेदीय महा- जान्ति पद्धति कीटिहोम विधि, अग्नि- होत्र विधि)	

## अथवा

(ख) लघु प्रबन्ध

या (2) व्याकरण

पत्र संख्या

ग्रन्थ

पूर्णांक 100

चतुर्थ पत्र

- |                                |        |
|--------------------------------|--------|
| (क) शब्देन्दुशेखर पंचसंध्यपन्त | 70 अंक |
| (ख) काव्य पदीय—प्रथम खण्ड      | 30 अंक |

पंचम पत्र

- |   |        |
|---|--------|
| (क) शब्देन्दु शेखर—अजन्त पुल्लिङ्ग से स्त्री प्रत्ययान्त              | 70 अंक |
| (ख) वाक्य पदीय—तृतीय काण्ड—काल समुद्देश से लिङ्ग से लिङ्ग समुद्देश तक | 30 अंक |

षष्ठ पत्र

- |   |        |
|---|--------|
| (क) शब्देन्दुशेखर—कारक तथा अव्ययी वर्ग                      | 50 अंक |
| (ख) लघु मज्जा तात्पर्य निरूपणांत को छोड़कर बौद्धार्थ निरूपण | 50 अंक |

सप्तम पत्र

- |   |        |
|---|--------|
| (क) नगहिक महाभाष्य (1 से 4 आन्विक)                    | 50 अंक |
| (ख) परिभाषेन्दु शेखर वाद बीज प्रकारण से समाप्ति दर्पण | 50 अंक |

अष्टम पत्र

- |   |        |
|---|--------|
| (क) स्वविषयक निबन्ध                                       | 20 अंक |
| (ख) व्याकरण शास्त्र का आलोचनात्मक इतिहास                  | 40 अंक |
| व्याकरण शास्त्र का इतिहास—युधिष्ठिर, निमांसक (प्रथम खण्ड) |        |
| न्याय सिद्धान्त मुक्तावलि शब्द खण्ड                       | 20 अंक |
| (ग) ध्वनि शास्त्र   | 20 अंक |

### सहायक पुस्तकें

1. भाषातत्त्व और वाक्य पदीय— डा० सत्यकाम वर्मा
2. स्फोट वाद—नागेश भट्ट
3. ए. मैन्ग्रुअल आफ संस्कृत फोनेटिक्स—उहेलन वैक
4. फोनेटिक्स—एल० माइक कीमथ
5. फोनेमिक्स—एल० माइक कीमथ
6. स्टेडोज इन पाणिनीय—आई एस. पावरे ।

अथवा

### अष्टम पत्र

विशिष्ट वैयाकरण का अध्ययन

100 अंक

निम्नांकित में से कोई एक—

पाणिनि, कात्यायान, पतञ्जलि नामेश, भर्तृहरि, भट्टोजिदीक्षित, हर दत्त, (कोई भी प्रामाणिक पुस्तकें अध्ययन्य हैं) वामान या दित्व पुरुषोत्तम देव, जिनेन्द्र बुद्ध माधव ।

अथवा (लघु प्रबन्ध)

या (3) साहित्य

पत्र संख्या	ग्रन्थ	पूर्णांक
चतुर्थ पत्र		
(क) काव्य प्रकाश		100
पंचम पत्र		
ध्वन्यालोक		100
षष्ठ पत्र		
रस गंगाधर (उपमान्त)		100
सप्तम पत्र		
(क) नैषधमहाकाव्य 1 से 5 सर्ग		40
(ख) विक्रमांकदेवचरितम् 1 से 5 सर्ग		30
(ग) वक्रोक्ति जीवित 1, 2 सर्ग		30

### सहायक ग्रन्थ—

1. कविरहस्य—हलायुषकृत
2. विदग्धमुखमण्डल—धर्मदास कृत

3. कविकल्पलता—देवेश्वर कृत
4. काव्यमीमांसा—राजशेखर कृत
5. हंसाष्टक—म. म. गंगाधर शास्त्री कृत
6. समस्या समज्या—श्री रामशास्त्र भागवताचार्य कृत
7. \* हर्षचरित—वाणभट्ट

## अष्टम पत्र

100

- |  |    |
|--|----|
| (क) स्वाविषयक निबन्ध                   | 20 |
| (ख) काव्य शास्त्र का आलोचनात्मक इतिहास | 40 |

## सहायक पुस्तकें

1. काव्यतत्व समीक्षा—डा. न. ना. चौधरी
2. सप्त कान्तेष्टस आफ अलंकार शास्त्र—डा. वे. राघवन्
3. स्टडीज इन दी हिस्ट्री आफ संस्कृत पालटिक्स—एस. के. डे,
4. स्टडीज आफ संस्कृत पोलिटिक्स—पी. वी. कारे
5. नम्बर आफ रसाज्—डा. वे. राघवन्
6. इण्डियन एस्थेटिक्स—के. सी. पांडे
- (ग) संस्कृत पद्य रचना 20

## सहायक पुस्तकें—

1. वेस्टन एस्थेटिक्स—के. सी. पांडे
2. पोयटिक्स—अरिस्टोटल
3. एस्थेटिक्स—क्रोस
- (घ) विशेष कवि अध्ययन 20
- निम्न लिखित में से कोई एक—
- वाल्मीकि, भास, कालिदास, भारवि,
- माघ, वाण

## सहायक पुस्तकें—

1. संस्कृत साहित्य का इतिहास—वलदेव उपाध्याय
2. संस्कृत साहित्य का इतिहास—वाचस्पति गैरोला

3. संस्कृत साहित्य का इतिहास—वरदाचार्य (हिन्दी अनुवाद)
4. संस्कृत साहित्य का इतिहास—ए. वी. कीथ  
(अनुवाद डा. मंगल देव शास्त्री)
5. संस्कृत नाटक—ए. वी. कीथ  
(अनुवाद डा. उदयभानु मिह)
6. संस्कृत कविदर्शन—डा० भोलाशंकर व्यास
7. भारतीय साहित्यशास्त्र—वलदेव उपाध्याय
8. पुराणतत्त्व मीमांसा—श्री कृष्णमणि त्रिपाठी
9. मार्कण्डेय पुराण एक अध्ययन—आचार्य ब्रह्मनाथ शुक्ल
10. महाभारत की समालोचना—सातवलेकर
11. हरिवंश पुराण का सांस्कृतिक विवेचन—वीणा मणि पाण्डेय
12. पुराण विपर्ज—वलदेव उपाध्याय
13. महाकवि अश्वघोष और उनका काव्य—डा० हरिदत्त शास्त्री
14. महाकवि भास : एक अध्ययन—वलदेव उपाध्याय
15. भास की भाषा सम्बन्धी तथा नाटकीय विशेषतायें  
—डा० जगदीश दत्त दीक्षित
16. कालिदास—वी. वी. मिराशी
17. कालिदास का भारत—म. श. उपाध्याय
18. महाकवि कालिदास—आचार्य रमाशंकर तिवारी
19. कालिदास और उसकी काव्यकला—वागीश्वर विद्यालंकार
20. कालिदास : जीवन, काल और कृतित्व—जयकृष्ण चौधरी
21. मेघदूत : एक अध्ययन—डा. श. अग्रवाल
22. कादम्बरी : एक सांस्कृतिक अध्ययन—वा. श. अग्रवाल
23. हर्षचरित : एक सांस्कृतिक अध्ययन—वा. शा. अग्रवाल
24. गद्यकार बाण—प्रो. सत्यपाल देव तथा महेन्द्र प्रताप
25. कालिदास और भद्रभूति—द्विजेन्द्रलाल राय
26. महाकवि नवभूति और उनका उत्तर रामचरित  
—कृष्णकान्त त्रिपाठी
27. महाकवि नवभूति—डा. गंगासागर राय
28. महाकवि बाण—केदारनाथ सारस्वत
29. महाकवि भारवि—दामोदर



30. महाकवि माध—गौरीनाथ पाठक

31. महाकवि माध—ननमोहन भट्ट

अथवा

अष्टम पत्र

लघु प्रबन्ध

100

या (4) सामान्य दर्शन

पत्र संख्या

ग्रन्थ

पूर्णांक

चतुर्थ पत्र

100

(क) कुसुमान्जलि—हरिदासीय

75

(ख) संशयोच्छेदवाद—प. नवसूदन झाकृत

25

पंचम पत्र

(क) शास्त्र दीपिका—तर्कपाद

50

(ख) शावर भाष्य—प्रथमाध्याय

50

षष्ठ पत्र

शांकरभाष्य: चतु: सूत्री नामतीसहित

160

सप्तम पत्र

(क) सिद्धीत्रयी

50

(ख) शुद्धाद्वैत मार्तण्ड

35

(ग) प्रत्यान भेद—नवसूदन

15

अष्टम पत्र

(क) स्वविषयक निबन्ध

40

(ख) भारतीय दर्शन साहित्य का आलोचनात्मक  
इतिहास

40

सहायक पुस्तकें—

1. भारतीय दर्शन का इतिहास—न. न. डा. रमेश मिश्र
2. भारतीय दर्शन—चटर्जी और दत्ता
3. तत्त्वमीमांस की रूपरेखा—ए. झा

4. दर्शन का प्रयोजन—डा. भगवान दास
5. सर्वदर्शन संग्रह—वलदेव उपाध्याय
6. आचार्य शंकर—वलदेव उपाध्याय
7. भारतीय दर्शन—वलदेव उपाध्याय
8. आधुनिक दर्शन की भूमिका—संगमलाल पाण्डेय
9. हिस्ट्री आफ इंडियन फिलासफी—एस. सी. दास गुप्ता
10. कम्परेटिव स्टडीज इन वेदान्त—एम. एन. सरकार
11. हिन्दू मिष्ट्रिज्म—एम. एन. सरकार
12. पोस्ट-शंकर डायलेक्टिक्स—आशुतोष शास्त्री
13. आइडियलिस्टिक थाट आफ इण्डिया—पी. टी. राजू
14. इण्डियन फिलासफी—डा. राधाकृष्णन्
15. प्रोब्लम्स आफ फिलासफी—कनिषम
16. भारतीय दर्शन शास्त्र का इतिहास—डा. देवराज तिवारी  
(ग) ब्रह्मसूत्र पर विभिन्न भाष्यों का तुलनात्मक  
अध्ययन 20

#### सहायक पुस्तकें—

चतुस्सूत्री—पं० मणिशंकर शास्त्री

- (घ) पाश्चात्य दर्शन का सामान्य अध्ययन 20  
चुकरात, प्लेटो, अरस्तू, डिस्कार्टस, स्पिनोजा,  
लैवनिट्स, लाक, वकैली, ह्यूम और कैण्ट के  
दार्शनिक विचार

#### सहायक पुस्तकें—

1. पाश्चात्य दर्शन—ए. के. वर्मा
2. पाश्चात्य दर्शन—सी. डी. शर्मा
3. पाश्चात्य दर्शन—रामावतार
4. पाश्चात्य दर्शन का इतिहास—गुलाब राय

अथवा

अष्टम पत्र

सद्यः प्रबन्ध

## या (5) वेदान्त

पत्र संख्या	ग्रन्थ	पूर्णाङ्क 100
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चतुर्थ पत्र

अद्वैतसिद्धि प्रथम परिच्छेद	100
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पंचम पत्र

(क) चित्सुखी—1 परिच्छेद	50
-------------------------	----

(ख) सिद्धान्तलेश संग्रह	50
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षष्ठ पत्र

100

(क) खण्डन-खण्ड-खाद्य सिद्धि	60
-----------------------------	----

(ख) वैज्ञानिक अद्वैतवाद—रामदास गौड़	40
-------------------------------------	----

सप्तम पत्र

100

(क) बृहदारण्यकोपनिषद् 1 से 4 अध्याय	50
-------------------------------------	----

शांकरभाष्य सहित

(ख) विवरण प्रमेय संग्रह—प्रथम सूत्र द्वितीय वर्णकान्त	50
---	----

अष्टम पत्र

100

(क) स्वविषयक निबन्ध	40
---------------------	----

(ख) वेदान्त का आलोचनात्मक इतिहास	40
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(ग) पाश्चात्य दर्शन का सामान्य अध्ययन	20
---------------------------------------	----

टिप्पणी—इस पत्र की सहायक पुस्तकें सामान्य दर्शन के अष्टम पत्र  
[के पाठ्यक्रम में दी गई हैं।

अथवा

अष्टम पत्र—

100

लघु प्रबन्ध

या (6) मीमांसा

पत्र संख्या	ग्रन्थ	पृष्ठांक
चतुर्थ पत्र		100
(क)	ज्ञान्वदीपिका — 7 से 12 अध्याय	70
(ख)	मीमांसानुक्रमशिका — मण्डन मिश्र	30
पंचम पत्र		100
(क)	ज्ञानर भाष्य — 1, 2, 3 अध्याय	70
(ख)	न्यायरत्नमाला नित्यकाम्य विवेकान्त	30
षष्ठ पत्र —		100
(क)	श्लोक वार्तिक — शून्यवादान्त	50
(ख)	तन्त्र वार्तिक — शून्यकारान्त	50
सप्तम पत्र		100
(क)	भाट्टरहस्य — द्वितीयाकारकान्त	50
(ख)	भाट्टकौस्तुभ — द्वितीयाध्याय	50
अष्टम पत्र		100
(क)	स्वविषयक निवन्ध	40
(ख)	मीमांसादर्शन का आलोचनात्मक इतिहास	40
सहायक पुस्तकें —		
1.	मीमांसा दर्शन — डा० मण्डन मिश्र	
2.	हिस्ट्री ऑफ मीमांसा — डा० गंगानाथ झा	
(ग)	पार्श्वात्य दर्शन का सामान्य अध्ययन	20
टिप्पणी—इन पत्र के (ग) अंश के लिये सहायक पुस्तकें सामान्य दर्शन के अष्टम पत्र के पाठ्यक्रम में दी गयी हैं।		
अथवा		
अष्टम पत्र		100
लघु प्रबन्ध		

## या (7) न्याय

पत्र संख्या	ग्रन्थ	पृष्ठांक
चतुर्थ पत्र		100
	व्युत्पत्तिवाद प्रथम कारक द्वितीय कारक का प्रथम खण्ड	
पंचम पत्र		100
(क)	कुसुमांजलि—हरिदासीय	60
(ख)	प्रामान्यवाद प्रथम विप्रति पत्ति पर्यन्त	40
षष्ठ पत्र		100
(क)	शक्तिवाद - सामान्य कान्ड	50
(ख)	शब्द शक्ति प्रकाशिका—नाम प्रकरणान्त	50
सप्तम पत्र		100
(क)	वैशेषिक सूत्रोपसार	60
(ख)	मुक्तिवाद गादाधरी	40
अष्टम पत्र		100
(क)	स्वविषयक निबन्ध	40
(ख)	न्याय का आलोचनात्मक इतिहास	40

## सहायक पुस्तकें—

1. न्यायवैशेषिक—हरिमोहन झा
2. न्याय परिचय—फणिभूषण भट्टाचार्य
3. नव्यन्याय का इतिहास—म० म० डा० उमेश मिश्र
4. न्यायवैशेषिक फिलोसफी—भादुरी
5. हिस्ट्री ऑफ नव्यन्याय—दिनेश चन्द्र भट्टाचार्य
6. न्याय ध्यौरी ऑफ नानेज—एम० सी० चटर्जी
- (ग) पाश्चात्य दर्शन का सामान्य अध्ययन 20

टिप्पणी—इस पत्र के (ग) अंश के लिए सहायक पुस्तकें सामान्य दर्शन के अष्टम पत्र के पाठ्यक्रम में दी गई हैं।

अथवा

अष्टम पत्र लघु प्रबन्ध 100

या (8) ज्योतिष (प्रायोगिक सहित)

पत्र संख्या ग्रन्थ पूर्णांक

चतुर्थ पत्र 100

(क) सिद्धान्त शिरोमणि—गणिताध्याय  
(ग्रहणाधिकारणी) 60

(ख) पंच स्वरा 20

(ग) उपपत्तीन्द्र जेखर—उपोदघात मात्र  
(म० म० दुर्गाप्रसाद द्विवेदी) 20

पंचम पत्र 100

(क) सिद्धान्त शिरोमणि (गोलाध्याय) 60

(ख) वास्तव चन्द्र शंगोनति साधन  
म० म० मुधाकर द्विवेदी 40

षष्ठ पत्र 100

(क) सिद्धान्त तत्त्व विवेक—मिप्रश्नाधिकारान्त 60

(ख) बृहत् संहिता (अर्घकांडाध्याय, दकारगल गर्भधारणा  
ध्याय, वास्तु विद्या, शस्यजातक) 40

सप्तम पत्र 100

(क) सिद्धान्त तत्त्व विवेक (विम्ब, उदयास्तन,  
चन्द्र सूर्य ग्रहणाधिकार) 50

(ख) आर्य मटीयम 10

(ग) सारावली (प्रारम्भ से तीन अध्याय) 40

अष्टम पत्र 100

(क) स्वविषयक इतिहास 40

## सहायक पुस्तकें—

(क) गणक तरंगिणी—म० म० मुधाकर द्विवेदी

(ख) भारतीय ज्योतिष शास्त्र का इतिहास—

शंकर बालकृष्ण दीक्षित

(ख) प्रायोगिक ज्ञान 60

(क) मकरन्द के आधार पर तिथि, नक्षत्र, योग करण

और संक्रान्ति का साधन 15

(ख) ज्योतिर्गणित (दृश्य गणित के आधार पर गृह

स्पष्ट ग्रहण, ग्रहों का उदयास्त

(ग) यन्त्रालय वैद्य 30

यन्त्र निर्माण प्रक्रिया सहित संपूर्ण यन्त्रों से

सम्यक् वेद्य प्रणाली का बोध

## सहायक ग्रन्थ—

यन्त्रालय वेद्य पथ प्रदर्शिका—गोकुल चन्द्र

अथवा

अष्टम पत्र लघु प्रबन्ध 100

या (9) जैन दर्शन

पत्र संख्या ग्रन्थ पूर्णांक

चतुर्थ पत्र 100

(क) सम्मति तर्क—पूर्वाद्ध 50

(ख) पंचास्तिकाय 50

पंचम पत्र 100

(क) सम्मति तर्क—उत्तराद्ध 50

(ख) राजवातिक, (पंचमाध्याय से समाप्ति तक) 50

षष्ठ पत्र 100

प्रवचन सार—आचार्य कुन्दकुक्

सप्तम पत्र 100

(क) अष्टशाहस्ती 70

(ख) पुरुषार्थ सिद्धिपाय 30

अष्टम पत्र 100

(क) स्वविषयक निबन्ध 40

(ख) जैन दर्शन का आलोचनात्मक इतिहास 40

सहायक पुस्तकें—

1. जैनदर्शन—महेंद्र कुमार न्यायाचार्य

2. न्यायविनिश्चय ग्रन्थ—महेंद्रकुमार न्यायाचार्य

3. जैन साहित्य और इतिहास—तत्त्वार्थ की श्रुत सागरीय दृष्टि की प्रस्तावना—नात्थूराम

(ग) पाश्चात्य दर्शन का सामान्य अध्ययन 20

टिप्पणी—इस पत्र के (ग) अंश की सहायक पुस्तकें सामान्य दर्शन के अष्टम पत्र के पाठ्यक्रम में दी गईं ।

अथवा

अष्टम पत्र लघु प्रबन्ध 100

या (10) बौद्ध दर्शन

पत्र संख्या ग्रन्थ पूर्णांक

चतुर्थ पत्र 100

(क) प्रमाणवार्तिक वर्मकीर्ति—मनोरथनन्दिवृत्ति सहित 70

(ख) विमुद्दिमणो—बुद्धवोपकृत 30

पंचम पत्र 100

(क) उरतसंग्रह शान्तिरसितकृत (प्रमाण, प्रत्यक्ष परिच्छेद) 50

(ख) नाव्यनिक कारिका चन्द्रकसती (नागार्जुन) 50

षष्ठ पत्र 100

(क) सद्धर्मपुण्डरीक (1 से 3 सूत्र) 50

(ख) आत्मतत्त्वविवेक (अणुभंगवाद—निराकरण) 50



सप्तम पत्र	100
(क) आलम्बन परीक्षा - दिडनाग	30
(ख) ज्ञानश्रीनिबन्धावली	20
(ग) रत्न कीर्तिनिबन्धावली	20
(घ) प्रमेयकमल मार्तण्ड निर्विकल्पप्रत्यक्षवाद निराकरण	30

## अथवा

सप्तम पत्र	100
(क) कुमारिलकृत श्लोकवार्तिक का निरालम्बवाद शून्यवाद एवं अपोहवाद	50
(ख) वाचस्पति कृत मामती का सर्वास्तिवाद विज्ञानवाद	50

अष्टम पत्र	100
(क) स्वविषयक निबन्ध	40
(ख) बौद्ध-दर्शन का आलोचनात्मक इतिहास	40

## सहायक पुस्तकें—

1. बौद्धदर्शन—आचार्य बलदेव उपाध्याय
  2. बौद्धदर्शन मीमांसा—आचार्य बलदेव उपाध्याय
  3. बौद्धदर्शन और वेदान्त—सी० डी० शर्मा
  4. अर्ली मानिस्टिक बुद्धिज्म—नलिनाक्षदत्त
  5. दी डाक्ट्रिन्स आफ बुद्ध—जार्ज ग्रिम
  6. बुद्धिष्टिक फिलासफी इन इण्डिया एन्ड सीलोन—कीथ
  7. दी बुद्धिष्टिक डाक्ट्रीन आफ यूनिवर्स फलक्स—मुकर्जी
  8. सेन्ट्रल कान्सेप्शन आफ बुद्धिज्म—एल्फेरेवात्स्की
  9. कान्सेप्शन आफ बुद्धिष्टिक निर्वाण—एल्फेरेवात्स्की
- (ग) पाश्चात्य दर्शन का सामान्य अध्ययन 20

टिप्पणी—इस पत्र के (ग) अंश की सहायक पुस्तकें सामान्य दर्शन के अष्टम पत्र के पाठ्यक्रम में दी गई हैं।

## अथवा

अष्टम पत्र	लघु प्रबन्ध	100
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## या (11) पौरोहित्य (प्रायोगिक सहित)

पत्र संख्या	ग्रन्थ	पूर्णांक
चतुर्थ पत्र		100
(क)	शुक्लयजुः संहिता - 1 से 10 अध्याय सस्वर उत्तर भाष्य सहित	75
(ख)	शतपथ ब्राह्मण प्रथम अध्याय सायणभाष्य सहित	25
पंचम पत्र		100
(क)	अनुष्ठान प्रकाश	35
(ख)	गायत्रीपुरश्चरण पद्धति सहायक ग्रन्थ—गायत्री पचांग	35
(ग)	शतचण्डी प्रयोग सहायक ग्रन्थ—सप्तशती सर्वस्व सरयूप्रसाद द्विवेदी	30
षष्ठ पत्र		100
(क)	विष्णुयाग पद्धति	35
(ख)	अग्निहोत्र पद्धति	25
(ग)	प्रायोगिक परीक्षा (क) व (ख) पर आधारित	40
सप्तम पत्र		100
(क)	काल्यायस श्रौत सूत्र-दर्शपूर्णभाषान्त	75
(ख)	वृहज्जातक—1 से 8 अध्याय	15
(ग)	कर्मकांड का इतिहास	10
अष्टम पत्र		100
(क)	स्वविषयक निबन्ध	40
(ख)	प्रायोगिक परीक्षा (अनुष्ठान प्रकाश, गायत्रीपुरश्चरण पद्धति तथा शतचण्डी प्रयोग पर आधारित	60
अथवा		
अष्टम पत्र	लघु प्रबन्ध	100

## या (12) धर्मशास्त्र

पत्र संख्या	ग्रन्थ	पूरांक
चतुर्थ पत्र		100

वीर मित्रोदय (व्यवहार प्रकाश तथा संस्कार प्रकाश)

पंचम पत्र		100
(क) निर्णय सिन्धु (द्वितीय व तृतीय परिच्छेद)		50
(ख) धर्म सिन्धु (प्रथम व द्वितीय परिच्छेद)		50

षष्ठ पत्र		100
(क) द्वैतनिर्णय—नरहरिकृत		50
(ख) प्रायश्चित्त विवेक—शूलपाणिनिकृत		50

सप्तम पत्र		100
(क) दायभाग—जीभूतवाहनकृत		30
(ख) दत्तकमीमांसा—नन्द पण्डितकृत		30
(ग) कौटिल्य अर्थशास्त्र धर्मस्थानीय तृतीय अविकारण		40

अथवा

सप्तम पत्र		100
(क) अत्रिस्मृति		50
(ख) पराशरस्मृति (माववभाष्य सहित एवं भूमिका सहित)		50

अथवा

सप्तम पत्र		100
(क) मीमांसा न्याय प्रकाश		50
(ख) श्रीमद्भागवत—पण्ड स्कन्ध (वर्ण श्रम धर्म)		50

अथवा

सप्तम पत्र		100
(क) व्यवहारमयूख		25
(ख) श्राद्धविवेक—रुद्रदेव		25

(ग) विवाद रत्नाकर 25

(घ) पुरुषार्थ चिन्तामणि 25

अष्टम पत्र 100

(क) स्वविषयक निबन्ध 40

(ख) धर्मशास्त्र का आलोचनात्मक इतिहास 40

सहायक पुस्तकें—

1. हिस्ट्री आफ धर्मशास्त्र—पी० वी० काणे

2. मानव धर्मशास्त्र—डा० भगवानदास

3. धर्म विज्ञान—स्वामी दयानन्द  
(भारतधर्म महामण्डल, काशी)

4. आर्यविधानम्—विश्वेश्वरनाथ रेऊ

(ग) यहूदी, ईसाई, इस्लाम तथा जरथुस्त्रवाद का सामान्य ज्ञान 20

सहायक पुस्तकें—

1. विश्वधर्म दर्शन—सांवलिया विहारी

2. दी अर्ली मिसन्स आफ क्रिस्टेनिटी—ई० रिन्गू

3. टेल्व अपोस्टिल्स—ई० रिन्गू

4. तसन्वुफ (सूफीमत)—चन्द्रवली पाण्डेय

5. दी रिलीजन आफ इस्लाम—मोहम्मद अली

6. रिलीजियस लाइफ एण्ड एटीथ्यूट आफ इस्लाम  
—डी० वी० मैकडानल्ड

7. टीचिंग आफ इस्लाम—मिर्जा गुलाम अहमद

8. दी रिलीजन आफ जरग्र—तारापोर वाला

अथवा

अष्टम पत्र लघु प्रबन्ध 100

या (13) पुराणैतिहास

पत्र संख्या अन्य पूर्णांक

चतुर्थ पत्र 100

(क) विष्णु पुराण 50

(ख) श्रीमद्भागवत् 10 में स्कन्ध उत्तरार्द्ध, 11 स्कन्ध 50

पंचम पत्र		100
(क) मार्कण्डेय पुराण		50
(ख) महाभारत-शान्तिपर्व		50
षष्ठ पत्र		100
(क) देवी भागवत		50
(ख) ब्रह्मवेवर्त पुराण		50
	अथवा	
षष्ठ पत्र	वायु पुराण	100
	अथवा	
षष्ठ पत्र	हरिवंश पुराण	100
	अथवा	
षष्ठ पत्र		100
(क) शिव पुराण (पूर्व भाग)		50
(ख) राजतरंगिणी (उत्तरार्द्ध)		50
	अथवा	
षष्ठ पत्र		100
(क) भक्ति रत्नावली		40
(ख) शाण्डिल्य सूत्र (नारायणतीर्थ टीका सहित)		30
(ग) योगवाजिष्ठ (स्थितिप्रकरण मात्र)		30
सप्तम पत्र		100

भारत का इतिहास सप्तम शताब्दी से 1707 तक

सहायक पुस्तकें—

1. भारतीय इतिहास : एक दृष्टि—डा० ज्योतिप्रसाद जैन
2. मध्यकालीन भारत—ईश्वरी प्रसाद
3. एडवान्ड हिस्ट्री आफ इन्डिया—के० के० दत्त, मजूमदार तथा राय चौधरी
4. मुगल रूल इन इन्डिया—एडवर्ड एण्ड ग्रेट

अष्टम पत्र

- |                                  |    |
|----------------------------------|----|
| (क) स्वविषयक निबन्ध              | 40 |
| (ख) पुराणों का आलोचनात्मक इतिहास | 40 |

सहायक पुस्तकें—

1. पुराणविमर्श—वलदेव उपाध्याय
2. इतिहास पुराण का अनुशीलन—रमाशंकर भट्टाचार्य
3. पुराणतत्त्व मीमांसा—श्रीकृष्णमणि त्रिपाठी
4. मार्कण्डेय पुराण : एक अध्ययन—आचार्य बद्रीनाथ शुक्ल
5. प्राचीन भारतीय साहित्य (प्रथम भाग द्वितीय खण्ड)—  
एम० विण्टरनिल्ज (अनुवाद—डा० रामचन्द्र पान्डेय)
6. पौराणिक डिनेस्टीज्—पार्जीटर

सहायक पुस्तकें—

1. विश्व इतिहास की रूपरेखा—एल० एन० गुप्ता
  2. विश्व का इतिहास—माथुर एवं शर्मा
  3. विश्व इतिहास—राम प्रसाद त्रिपाठी
  4. वर्ल्ड हिस्ट्री—डेवीज्
- |                     |    |
|---------------------|----|
| (ग) यूरोप का इतिहास | 20 |
|---------------------|----|

सहायक पुस्तकें—

1. यूरोप 1779 से —सेठी एवं चावला
2. यूरोप इन दी नाइनटीन्थ सैन्चुरी—ए० जे० ग्रान्ट एन्ड हैरोल्ड टेम्प्लरी

अथवा

अष्टम पत्र	लघु प्रबन्ध	100
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या (14) आगम

चतुर्थ पत्र		100
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- |                            |    |
|----------------------------|----|
| (क) योगिनी हृदयम्          | 50 |
| अमृतानन्द कृत दीपिका सहित  |    |
| (ख) शिव दृष्टि—सोमानन्दकृत | 50 |

पंचम पत्र	100
(क) ईश्वर प्रत्यमिता	50
विमर्शिनीयुता शातिषिकारान्ता	
(ख) सप्तशती सर्वस्वम्—सटीक	50
आचार्य सरयू प्रसाद द्विवेदी	
षष्ठ पत्र	100
(क) तन्त्रालोक (अभिनव गुप्त 1-2)	50
(ख) शारदा तिवम्—(1 से 3 पटल तक)	50
सप्तम पत्र	100
(क) आगम रहस्यम् (1 से 10 पटल तक)	50
(ख) कामविलास—आचार्य सरयू प्रसाद द्विवेदी	50
अष्टम पत्र	100
(क) स्वशास्त्रीय निबन्ध	
(ख) स्वशास्त्रीय व्युत्पत्ति	
(ग) स्वशास्त्रीय इतिहास	
(घ) स्वशास्त्रीय पूजा परिज्ञानम्	
अथवा	
अष्टम पत्र	लघु प्रबन्ध 100
या (15) वास्तु तथा शिल्प	] इन विषयों के पाठ्यक्रम तथा पाठ्य पुस्तकों बाद में घोषित की जावेंगी ।
या (16) आगम तथा तन्त्र	
या (17) पाली तथा प्राकृत	

टिप्पणी—वैकल्पिक विशिष्ट विषय के अन्तर्गत वेद, ज्योतिष तथा पौरोहित्य विषय के पाठ्यक्रम में तद् तद् विषय की प्रायोगिक परीक्षा भी होगी । वह उस पत्र का भाग होगी । ऐसे स्थलों पर सैद्धान्तिक परीक्षा तथा प्रायोगिक परीक्षा में पृथक् पृथक् न्यूनतम उत्तीरणांक प्राप्त करना आवश्यक होगा । प्रायोगिक परीक्षा विश्वविद्यालय से नियुक्त परीक्षक द्वारा निर्दिष्ट परीक्षा केन्द्र पर निर्दिष्ट समय

पर ली जाएगी । इस परीक्षा का समय सैद्धान्तिक के अतिरिक्त रहेगा । इसके अंक सम्बन्धित पत्र के अंकों के साथ सम्मिलित कर दिये जायेंगे ।

सूचना— शास्त्री तथा आचार्य परीक्षाओं की पाठ्य पुस्तकें निम्न लिखित स्थानों से प्राप्त की जा सकती हैं—

1. चौखम्बा संस्कृत सीरीज, पो० वा० नं० 8, वाराणसी-1
  2. मोतीलाल बनारसीदास, नेपाली-खपरा, वाराणसी
  3. मास्टर खेलाड़ीलाल एन्डसन्स, वाराणसी
  4. निर्णय सागर प्रेस, बम्बई ।
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## APPENDIX-D

विश्वविद्यालय में दिनांक 8 अप्रैल, 1971 को मध्याह्न पूर्व  
11-00 बजे सम्पन्न "बोर्ड आफ स्टेडीज् इन फैकल्टी आफ  
संस्कृत स्टेडीज्" की बैठक का कार्य विवरण :—

## उपस्थिति

1. श्री गोविन्द नारायण शर्मा-संयोजक
2. डा० पी० एल० भार्गव
3. श्री सुरजनदास स्वामी
4. श्री खड्गनाथ मिश्र
5. श्री दुर्गादत्त शर्मा
6. श्री श्याम नन्दन मिश्र
7. श्री विश्वनाथ मिश्र
8. श्री मोतीलाल जोशी (विशेष आमन्त्रित)

(1) बोर्ड आफ स्टेडीज् इस फैकल्टी आफ संस्कृत स्टेडीज् के दिनांक 25 एवं 26 मार्च 1971 से विनिश्चय सं 5 के अनुसार नियुक्त त्रिसदस्यीय समिति के शास्त्री आचार्य के पाठ्यक्रम से सम्बन्धित आर्डिनेन्सेज एवं नियम बनाने सम्बन्धी संस्तुतियों पर विचार किया ।

संस्तुति करने का निश्चय किया गया कि शास्त्री, आचार्य परीक्षाओं की दृष्टि से:—

- (1) आर्डिनेन्सेज सं० 170, 171, 172, 173, 174, 175, 179, 187, 191a, 193 व 198 में परिशोधन कर लागू किया जाय अर्थात् इनमें जहां जहां "वी० काम०" शब्द है उसके पश्चात् "शास्त्री" शब्द जोड़ा जाय तथा जहां जहां "एम० काम०" शब्द है, वहां वहां उसके पश्चात् "एण्ड आचार्य" शब्द जोड़ा जाय तथा "एम० काम०" शब्द के पूर्व का "एण्ड" शब्द हटा दिया जाय ।
- (2) आर्डिनेन्सेज सं० 86, 86 a, 89, 90, 91, 92, 97, 142, 143, 144, 144c, 145, 146, 147, 162, 164, 165, 166, 168a, 177, 178, 185, 186, 188, 190, 191, 191A, 191B, 191C, 191D, 192, 192-a, 196, 197 को यथावत् लागू किया जाय ।

(2) संस्तुति करने का निश्चय किया गया कि—

(1) त्रिवर्षीय शास्त्री परीक्षा 1972 एवं आचार्य (पूर्वाद्ध) परीक्षा 1972 में प्रवेश के नियमों में जहां विश्वविद्यालय द्वारा मान्यता प्राप्त अन्य संस्कृत परीक्षाओं का उल्लेख हो, उसके लिये विनिश्चय वाद में किया जायगा। इसके पूर्व देश के जिन जिन विश्वविद्यालयों में प्राच्य विद्या संकाय के अन्तर्गत संस्कृत परीक्षाएँ चलती हों, उन-उन विश्वविद्यालयों के पाठ्यक्रम व नियम, उपनियम उपलब्ध कर आगामी बैठक में विचारार्थ रखे जाय। इसी प्रकार समस्त संस्कृत विश्वविद्यालयों की परीक्षाओं के पाठ्यक्रम तथा केन्द्र स्थापना सम्बन्धी नियम, महाविद्यालय-सम्बद्धता सम्बन्धी नियम, परीक्षा केन्द्र सूची, परीक्षा केन्द्र नियन्त्रण सम्बन्धी नियम तथा 5 वर्ष के परीक्षा प्रश्न पत्रों के सैट्स उपलब्ध किये जाय।

(3) संस्तुति करने का निश्चय किया गया कि—

संस्कृत महाविद्यालयों में परीक्षा व प्रवेश सम्बन्धी आर्डिनेन्सेज, रूल्स, रेग्युलेशन्स आदि का हिन्दी अनुवाद शिक्षा सत्र 1972 के प्रारंभ के पूर्व भिजवाने की व्यवस्था करायी जाय।

(4) संस्तुति करने का निश्चय किया गया कि—

यूनिवर्सिटी हैण्ड बुक पार्ट II का हिन्दी अनुवाद उपलब्ध कराने की व्यवस्था की जाय।

(5) संस्तुति करने का निश्चय किया गया कि—

विद्या वारिधि एवं वाचस्पति के नियमों का प्रारूप बनाने के लिये निम्नलिखित महानुभावों की कमेटी नियुक्त कर 30 अप्रैल 72 पूर्व नियमों का प्रारूप प्राप्त किया जाय।

1) श्री गोविन्द नारायण शर्मा (संयोजक)

2) डा० पी० एल० भार्गव

3) श्री राधेश्याम कलावटिया

प्राध्यापक, राजकीय धूलेश्वर संस्कृत कालेज, मनोहरपुर।

4) श्री श्याम सुन्दर चूलेट

प्राध्यापक, महाराज-संस्कृत कालेज, जयपुर।

(6) संस्तुति करने का निश्चय किया गया कि—

राजस्थान विश्वविद्यालय के सीमा-अधिकार क्षेत्र में अन्य विश्वविद्यालय से सम्बद्धता प्राप्त किसी डिग्री या पोस्ट-ग्रेजुएट कालेज के चलने की जिस

प्रकार स्थिति नहीं रहती है उसी प्रकार अन्य संस्कृत विश्वविद्यालयों से सम्बद्धता लेकर राजस्थान में चल रहे संस्कृत कालेजों पर प्रतिबन्ध लगाने के क्रम में विधि-संगत कार्यवाही की संभावनाओं की जांच करायी जाय तथा नीति निर्धारण कराया जाय ।

(7) संस्तुति करने का निश्चय किया गया कि—

(1) शास्त्री परीक्षा के अनिवार्य विषयों में सामान्य संस्कृत का माध्यम संस्कृत, सामान्य हिन्दी का माध्यम हिन्दी, सामान्य अंग्रेजी का माध्यम अंग्रेजी वैकल्पिक मुख्य विषय का माध्यम संस्कृत तथा वैकल्पिक विषयों में फलित ज्योतिष व सामान्य पौरोहित्य का माध्यम संस्कृत, विदेशी भाषा का माध्यम सम्बन्धित भाषा, अंग्रेजी साहित्य का माध्यम अंग्रेजी तथा शेष विषयों का माध्यम हिन्दी रखा जाय ।

(2) आचार्य परीक्षा के सभी प्रश्न पत्रों का माध्यम संस्कृत रखा जाय ।

ह० गोविन्द नारायण शर्मा  
संयोजक

## परिशिष्ट 'इ'

## शास्त्री प्रथम वर्ष

1. सामान्य संस्कृत प्रथम पत्र निम्न प्रकार संशोधित कर पढ़ा जावे ।

(क) व्याकरण—संधि, षड्लिंग एवं गणों 30 अंक  
के आधार पर प्रायोगिक प्रश्नों  
में सहेनुक अशुद्धि संशोधन

(ख) अनुवाद— हिन्दी से संस्कृत 30 अङ्क

(ग) काव्य -- रघुवंश (13 वां सर्ग) 20 अङ्क

(घ) नाटक — अभिज्ञान शाकुन्तल 20 अंक

2. ऋग्वेद प्रथम पत्र के 'क' भाग में निम्नलिखित 10 सूक्त निर्धारित किये जावें ।

1. मांगलिक मन्त्रा :
  2. स्वास्ति वाचन मन्त्रा :
  3. आशीर्वचन मन्त्रा :
  4. गरुपति सूक्त :
  5. सरस्वती सूक्त :
  6. श्री सूक्त :
  7. पर्जन्यसूक्त
  8. औपधिसूक्त
  9. देवपूजा मंत्रा :
  10. हरिसूक्त
3. यजुर्वेद प्रथम पत्र के 'ख' भाग से 'संहिता' शब्द निरस्त किया जावे ।
4. साहित्य प्रथम पत्र की क्र० सं० 3 पर 'रुक्मिणी हरण' के स्थान पर 'स्वप्न वासव दत्तम्' पुस्तक प्रतिस्थापित की जावे ।
5. सामान्य दर्शन द्वितीय पत्र की क्र० सं० 1 पर निहित पुस्तक को 'तन्त्र सिद्धान्त रत्नावली' संशोधित की जावे ।

### शास्त्री द्वितीय वर्ष

1. ऋग्वेद प्रथम पत्र के 'क' भाग का 'ऋक् संहिता' 9 मंडल सस्वर के स्थान पर 'ऋक् संहिता नवम मंडल सस्वर' शब्द प्रतिस्थापित किये जावे ।
2. शुक्ल यजुर्वेद प्रथम पत्र के 'क भाग में' 21 से 31 अध्याय के स्थान पर '31 वें अध्याय से 40 अध्याय' शब्द प्रतिस्थापित किये जावे ।
3. शुक्ल यजुर्वेद के द्वितीय पत्र को निम्न प्रकार संशोधित किया जावे ।
 

(क) शुक्ल यजुः संहिता 1 से 3 अध्याय का पद पाठ	50 अंक
(ख) पुरुष सूक्ति का जटा पाठ	25 अंक
(ग) पिगल छन्द सूत्र--वैदिक छन्द प्रकरण मात्र	25 अंक
4. साहित्य के द्वितीय पत्र की क्रं. सं. 1 पर निहित कुवलयानन्द के आगे 'प्रारम्भ से काव्यलिङ्ग' अलंकार तक शब्द प्रतिस्थापित किये जावें ।
5. पौरोहित्य प्रथम पत्र के 'क' भाग को निम्न प्रकार संशोधित किया जावे ।
 

'क' यजुर्वेदीय मंत्र संहिता--वेणी राम गौड़ द्वारा संपादित और दण्ड मंत्र
6. सामान्य पौरोहित्य प्रथम पत्र के 'क' भाग में 'पारस्कर गृहन सूत्र प्रथम और द्वितीय तंत्र' संशोधित किया जावे ।
7. भाषा विज्ञान के पत्र के सहायक ग्रन्थों में निम्नलिखित पुस्तक जोड़ी जावे ।
5. भाषा विज्ञान के तत्व देवेन्द्र शर्मा

### शास्त्री अन्तिम वर्ष

1. ऋग्वेद 'प्रयोग सहित द्वितीय पत्र के 'क' भाग को निम्न प्रकार संशोधित किया जावे ।

(क) सिद्धान्त कौमुदी-वैदिकी क्रिया (1 से 40 अध्याय)

20 अंक

2. इसी पत्र के 'ग' भाग के 60 अंक संशोधित किये जावे ।

3. यजुर्वेद के द्वितीय पत्र के अंक निम्न प्रकार संशोधित किये जावें ।

(क) 20 अंक

(ख) 20 अंक

(ग) 60 अंक

4. अथर्ववेद की निम्न प्रकार पाठ्य पुस्तकें रखी जावें

पत्र संख्या	ग्रन्थ	पूर्णांक
1.	कौशिक गृह्य सूत्र का गृह्य प्रकरण एकोद्दिष्ट पार्वण श्राद्ध पद्धति	100 अंक
2	(क) सिद्धान्त कौमुदी वैदिकी प्रक्रिया (1 से 4 अध्याय)	20 अंक
	(ख) मीमांसा परिभाषा कृष्ण यजुवा	20 अंक
	(ग) प्रयोगिक परीक्षा- प्रथम पत्र पर आधारित	60 अंक
5.	साहित्य प्रथम पत्र में 'उत्तर रामचरित्तम' के स्थान पर 'रत्नावली' पुस्तक रखी जावे ।	
6.	साहित्य द्वितीय पत्र 'ग' भाग को निम्न प्रकार संशोधित किया जावे । (ग) सरल रचना-अनुष्टुप, इन्द्रवज्रा, उमेन्द्र वज्रा, द्रुत विलम्बित, वंशास्य, वसन्ततिलका एवं मालिनी के छन्दों के आधार पर, कम से कम 2 छन्दों का प्रयोग हो ।	
7.	वेदान्त प्रथम पत्र के 'ग' भाग में 'भगवद् गीता' 1 से 6 अध्याय संशोधित हो ।	

8. पौरोहित्य प्रथम पत्र के 'ख' भाग में 'श्राद्ध विवेक' 2 व 3 परिच्छेद तथा 'ग' भाग में प्रतिष्ठा प्रकाश-सप्तम परिच्छेद मात्र, संशोधित किया जावे ।
9. पौरोहित्य द्वितीय पत्र में 'क' भाग के 40 अंक तथा 'ख' भाग के 60 अंक संशोधित हों ।
- 10 पुराणेतिहास में 'इन्द्रविजय' 125 पृष्ठ तक वैद भाग (रहित) पढ़ा जावे ।

अधिष्ठाता

## परिशिष्ट 'एफ'

(आचार्य पूर्वाध)

1. अग्निवार्य प्रथम पत्र के वैदिक साहित्य वाले भाग के ऋग्भाष्य संग्रह के 1 से 7, 9, 10, 13 से 15, 17 से 19, 21, 23, 24, 27 से 33 सूक्त रखे जावें ।
2. ऋग्वेद तृतीय पत्र के 'क' भाग में 'सायण भाष्य सहित' शब्द स्थापित किये जावें । तथा 'घ' भाग में निरुक्ति के 'प्रथम एवं सप्तम (दैवत) के शब्द स्थापित किये जावें ।
3. ऋग्वेद चतुर्थ पत्र के 'क' भाग में निम्न लिखित 40 सूक्त रखे जावे ।

(क) ऋक् संहिता प्रथम मंडल के 1, 19, 25, 32, 35, 115, 116, 143, 154, 160 वां सूक्त, तथा तृतीय मंडल के 12 से 14, 33, 52, 55, 59, से 61, 68 वां सूक्त तथा सप्तम मंडल के 18, 49, 61, 63, 68, 71, 83, 86, 88, 103 वां सूक्त तथा दशम मंडल के 34, 71, 90, 108, 117, 121, 125, 129, 135, 191 वां सूक्त ।

4. यजुर्वेद के तृतीय पत्र को निम्न प्रकार संशोधित किये जावे ।

(क) भाग में उव्वट' के स्थान पर 'महीधर'

(ग) भाग में निसक्त के 'प्रथम अध्याय व सप्तम अध्याय'

5. यजुर्वेद के चतुर्थ पत्र के 'क' भाग में 'उव्वट' के स्थान पर 'महीधर' शब्द प्रति स्थापित किया जावे तथा इस भाग के 50 अंक किये जावें । 'ख' भाग में 'शतपथ ब्राह्मण प्रथम कांड 'सायण भाष्य सहित' 50 अंक का संशोधित किया जावे, इस पत्र का 'ग' व 'घ' भाग निरस्त किया जावे ।

6. सामवेद तृतीय पत्र के 'ख' भाग में निरुक्त प्रथम व सप्तम अध्याय पढ़ा जाये ।

7. अथर्ववेद तृतीय पत्र के 'छ' भाग में निरुक्त 'प्रथम व सप्तम अध्याय संशोधित हो ।

प्राचार्य (उत्तराय)

1. शुक्ला यजुर्वेद द्वितीय पत्र 'क' भाग में कात्यायन श्रौत सूत्र 1 अध्याय से 5 अध्याय तक-संस्लावृत्ति सहित पढ़ा जावे तथा 'क' व 'ख' भाग के 50-50 अंक निर्धारित किये जावे ।



2. शुक्ल युजवेद तृतीय पत्र के 'क' भाग में 'कात्यायन श्रोत सूत्र भूमिका (पूर्वार्ध) म०म०पं० विद्याधर गौड़ कृत-25 अंक 'ख' भाग में विष्णु भाग पद्धति-25 अंक ।
3. व्याकरण द्वितीय पत्र 'ख' भाग में 'वौद्धार्थ निरूपण रहित' शब्द स्थापित किये जावें ।
4. व्याकरण चतुर्थ पत्र में निम्नलिखित सहायक पुस्तकें रखी जावें—  
अथवा विजिष्ट द्रव्या करण का अध्ययन अनुशंसित पुस्तकें

Theodore Goldsheker—Panini, His place in Sanskrit Literature,

Rajani Kanta Gupta—Panini

V.S. Agrawal—India in the Age of Panini

B.N. Puri—India in the Age of Patanjali

K.A.S. Iyer—Bharitihari

परिशिष्ट-जो

AMENDMENTS TO ORDINANCES/REGULATIONS  
RELATING TO SHASTRI AND ACHARYA  
EXAMINATIONS

*Ref : Resolution No. 7 doted 9.4.1971 of the Faculty of  
Sanskrit Studies :*

SHASTRI EXAMINATION

- (1) In O.153-A *insert*—‘and (iii) Acharya’ between the words—‘(ii) Master of Laws’ and ‘does not take the Final/Part II Examination.’
- (2) In O.153-B *insert*—‘/Shastri’ between the words—‘B.Com.’ and LL.B. (A)’.
- (3) In the first para of O.193 *substitute*—‘(c) in the compulsory subject of Samanya Sanskrit or any one of the optional subjects under Group II or III of O.329M-11 at the First Year/Second Year/Final Year Shastri Examination’ for ‘(c) the ‘Shastri Examination’.
- (4) The Note given below O.193 be re-writtan as follows :—  

“A candidate failing in (i) one or more compulsory subjects prescribed for the First Year T.D.C. Examination in the Faculties of Arts, Science and Commerce and (ii) the compulsory subjects of General English and Samanya Hindi prescribed for the First and Second Year Shastri Examinations respectively will be allowed to reappear in the failing subject (s) at the supplementary Examination subject to the conditions and limitations as prescribed in Ordinances Nos. 200B and 204 (Faculty of Arts), 218 and 222 (Faculty of Science), 241 (Faculty of Commerce) and 329M-11 (Faculty of Sanskrit Studies)’.
- (5) In the Second para to O.198 (1) *insert* - ‘or the compulsory subjects of General English/Samanya Hindi at the First/Second Year Shastri Examination’ between the words—‘First Year T. D. C. Examination in Arts, Science and Commerce’ and ‘but pass in other subjects’.
- (6) Ordinances Nos. 329M-10, 329M-11, 329M-12, 329M-13, 329M-14 and 329M-15 be re-written as follows :

*O.329M--10 :*

The courses of study for the Shastri Examination shall extend over a period of three years as an integrated course and there shall be an examination at the end of each year, namely, 'First Year Shastri Examination' at the end of first year, 'Second Year Shastri Examination' at the end of second year and 'Final Year Shastri Examination' at the end of third year.

*O.329M--11 :*

The subjects for the examination shall be as follows :

*Group I—Compulsory :*

- |                     |  |
|---------------------|--|
| 1. Samanya Sanskrit | To be offered in all the three examinations.       |
| 2. Samanya Hindi    | To be offered in the Second Year Examination only. |
| 3. General English  | To be offered in the First Year Examination only.  |

*Group II—Main optional :* One of the following :—  
( subject to the condition given in Note (1) below )

1. Veda—One of the four Vedas, viz. Rigveda, Yajurveda, Samveda and Arthaveda (with practical)
2. Vyakarna
3. Sahitya
4. Samanya Darshan
5. Vedanta
6. Mimansa
7. Nyaya
8. Jyotish (with practical)
9. Dharmashastra
10. Jain Darshana
11. Buddha Darshana

12. Paurohitya (with Practical)
13. Puranetihas.

*Group III—Optional : Any two of the following :*

1. Hindi Sahitya
2. English Literature
3. Foreign Language (German or French or Russian or Persian)
4. History
5. Political Science
6. Economics
7. Statistics
8. Public Administration
9. Psychology
10. Sociology
11. Home Science
12. Phalit Jyotisha | (Only one of these two
13. Samanya Paurohitya | can be offered.)
14. Bhasha Vigyan and Sanskrit Bhasha ka Itihas.

Note 1 :— Permission for offering one main optional subject for the Shastri Examination under Group II shall be given keeping in view the main subject offered by the candidate at the Upadhyaya Examination as indicated below :

Main subject offered at the Upadhyaya Exam.	Main optional subjects under Group II any one of which can be allowed to be offered :
(1) Veda	Veda, Sahitya, Mimansa, Dharmashastra, Buddha Darshana, Paurohitya and Puranetihas.
(2) Vyakarna	Vyakarna, Sahitya, Samanya Darshan, Vedanta, Mimansa, Dharmashastra, Jain Darshana, Buddha Darshana, Paurohitya and Puranetihas.
(3) Sahitya	Sahitya, Samanya, Darshan, Vedanta, Mimansa, Dharmashastra, Jain Darshana, Buddha Darshana, Paurohitya and Puranetihas.

- |                       |  |
|-----------------------|--|
| (4) Mimansa           | Sahitya, Samanya Darshan, Vedanta, Mimansa, Dharmashastra, Jain Darshana, Buddha Darshana, Paurohitya and Puranetihas          |
| (5) Nyaya             | Sahitya, Samanya Darshana, Vedanta, Mimansa, Nyaya, Dharmashastra, Jain Darshana, Buddha Darshana, Paurohitya and Puranetihas. |
| (6) Vedanta           | Sahitya, Samanya Darshan, Vedanta, Mimansa, Nyaya, Dharmashastra, Jain Darshan, Buddha Darshana, Paurohitya and Puranetihas.   |
| (7) Jain Darshana     | Sahitya, Samanya Darshana, Jain Darshana, Buddha Darshana and Puranetihas.   |
| (8) Jyotish           | Sahitya, Buddha Darshana, Paurohitya and Puranetihas.  |
| (9) Dharmashastra     | Sahitya, Samanya Darshana, Vedanta, Mimansa, Dharmashastra, Jain Darshana, Buddha Darshana, Paurohitya and Puranetihas.        |
| (10) Paurohitya       | Veda, Sahitya, Jyotish, Dharmashastra, Buddha Darshana and Puranetihas.  |
| (11) Samanya Darshana | Sahitya, Samanya Darshana, Vedanta, Mimansa, Nyaya, Dharmashastra, Jain Darshana, Buddha Darshana, Paurohitya and Puranetihas. |
- (2) Passing in the compulsory subject of General English prescribed for the First Year Shastri Examination will not be necessary for the examinations of 1972, 1973 and 1974 but it will be necessary for a candidate to put in the required minimum attendance and to appear at the examination. If a candidate does not pass, he will be given five more chances in the immediately following main and supplementary examinations to clear the subject and, if successful, a mention to that effect will be made in his degree.
- (3) If a non-Hindi speaking candidate passes in all the subjects but fails in the compulsory subject of Samanya Hindi at the Second Year Shastri Examination, he will be permitted to continue his studies in the Final Year class and given two more chances

in the immediately following main and supplementary examinations to clear the same. If a candidate fails to clear the subject in these two chances (inability to avail a chance shall be treated as failure), his second Year Shastri Examination shall stand cancelled.

- (4) A candidate who has once passed in the compulsory subject(s) shall not be required to appear in the same subject(s) again even if he has failed at the examination. However, if a candidate wishes to re-appear in the examination as a whole, he will be permitted to do so but in that case his earlier performance in the compulsory subjects shall be treated as cancelled.

*O.329M-12 :*

A candidate who, after passing the Upadhyaya Part I Examination of the Board of Secondary Education, Rajasthan or an examination recognised by the University as equivalent thereto, has attended a regular course of study in an affiliated college for one academic year shall be eligible to appear at the First Year Shastri Examination.

*O.329M-13 :*

A candidate who, after passing the First Year Shastri Examination of the University or the Upadhyaya Part II Examination of the Board of Secondary Education, Rajasthan or the Upadhyaya or Madhyama Examination conducted by the Registrar, Departmental Examinations, Rajasthan has attended a regular course of study in an affiliated college for one academic year shall be eligible to appear at the Second Year Shastri Examination, provided that a candidate appearing at the Second Year Shastri Examination after passing the Upadhyaya Part II Examination of the Board of Secondary Education, Rajasthan or the Upadhyaya or Madhyama Examination conducted by the Registrar, Departmental Examinations, Rajasthan shall be required to appear in the compulsory paper of General English prescribed for the First Year Shastri Examination in addition to the papers of the Second Year Shastri Examination.

*O.329M-14 :*

A candidate who, after passing the Second Year Shastri Examination of the University, has attended a

regular course of study in an affiliated college for one academic year shall be eligible to appear at the Final Year Shastri Examination.

Note :— A candidate who passes the Shastri Part I Examination of the University in 1971 shall be eligible to appear at the Shastri Part II Examination of 1972 under the Ordinances and Regulations of the University in-force during the session 1970-71. The syllabus shall be the same as prescribed by the Registrar, Departmental Examinations, Rajasthan, for the Examination of 1971.

*O.329M-15 :*

A candidate who has passed the Shastri Examination of the University or the Shastri Examination conducted by the Registrar, Departmental Examinations, Rajasthan shall be eligible to appear at the Shastri Examination in any subsequent year in one or at the most two more optional subjects—Main optional and/or optional prescribed for the examination and not already taken by him. A candidate who has passed the B. A. examination of the University with Sanskrit as an optional subject shall be eligible to appear at the Shastri Examination in any subsequent year in the main optional subject of Sahitya. Permission to appear in the additional optional subject(s) will be given if the candidate is not registered for any other examination of the University in the same year. Such a candidate shall be required to appear in all the papers of the subject(s) offered by him in one and the same year and, if successful, a certificate to that effect will be given to him.

A candidate who desires to enter for an examination under this Ordinance must submit his application on a prescribed form so as to reach the Registrar not later than 15th of September, October 1 for candidates who appear at the supplementary Examination or by the 15th of October, if accompanied by a late fee of Rs. 10/— or by 1st November in case he is a college candidate preceding the date of examination. The application shall be accompanied by an examination fee of Rs. 20/— and a marks fee of Rs. 2/— and shall be forwarded by the Principal of the College concerned or other competent authority who forwarded the candidate's original application for permission to appear at the examination.

In the case of a candidate whose application is rejected or who does not submit an application but only sends in the fees the amount paid by the candidate on account of fees shall be refunded after deducting Rs. 2/-.

*R.43-C* be re-written as follows :—

*R.43-C* : A candidate who obtains at least 36% marks in each subject (except the compulsory subject of General English prescribed for the First Year Shastri Examination passing in which will not be necessary for the examinations of 1972, 1973 and 1974) shall be declared successful at each of the three examinations; provided that where a practical test is prescribed, a candidate shall be required to obtain at least 25% marks in theory and practical separately and 36% marks in theory and practical combined in each subject.

No division shall be awarded at the First year and Second Year Shastri Examination.

Successful candidates at the Final Year Shastri Examination shall be placed in three divisions. Those obtaining 60% or more marks in the aggregate of optional—Main optional as well as optional subjects of all the three examinations shall be placed in First Division, those obtaining 48% or more marks shall be placed in Second Division and the rest in Third Division. Candidates securing 75% or more marks in the subject(s) of Group II and/or Group III shall be awarded Distinction in that group. In the case of candidates admitted to the Second Year of the Shastri Course after passing an examination other than the First Year Shastri Examination of the University, the marks obtained by them at the second and the final year Shastri Examinations shall be taken into account for awarding division.

Each paper shall be of 3 hours duration and carry 100 marks. Practical Test, where provided, shall be part of a paper in the subject. The practical test will be conducted by an examiner appointed by the University at a place and on a date and time fixed by the University. Extra time will be allowed for the practical test in addition to the time of 3 hours allotted for each theory paper. The marks obtained by a candidate in the practical test shall be added to the marks obtained in the theory part of the paper concerned.

The medium of question-papers and their answers will be as follows :



- (a) Sanskrit for the compulsory subject of Samanya Sanskrit, the main optional subjects under Group II and the optional subjects of Phalit Jyotish and Samanya Paurohitya under Group III.
  - (b) English for the compulsory subject of General English and the optional subject of English Literature under Group III.
  - (c) The language concerned for the optional subject of Foreign Language under Group III.
  - (d) Hindi for all the remaining subjects.
-

## FIRST YEAR EXAMINATION

Group & Subject	No. of papers 2.	Max. marks in the subject 3.	Min. pass marks in the subject 4.
1.			
<b>GROUP I—Compulsory :</b>			
1. Samanya Sanskrit	1	100	36
2. General English	1	100	36
<b>Group II—Main Optional : One of the following (subject to the condition laid down in O.329M-11)</b>			
1. <i>Veda</i> —One of the four Vedas viz., Rigveea, Yajurveda, Samveda and Arthveda (with practical)	2	200	72
2. Vyakarana	2	200	72
2. Sahitya	2	200	72
4. Samanya Darshan	2	200	79
5. Vedanta	2	200	72
6. Mimansa	2	200	72
7. Nyaya	2	200	72
8. Jyotishi	2	200	72
9. Dharmashastra	2	200	72
10. Jain Darshana	2	200	72

11. Buddha Darshana	2	200	72
12. Paurohitya	2	200	72
13. Puranetihas	2	200	72
<i>Group III—Optional : Any two of the following :</i>			
1. Hindi Literature	1	100	36
2. English Literature	1	100	36
3. Foreign Language (German, or French or Persian)	1	100	36
4. History	1	100	36
5. Political Science	1	100	36
6. Economics	1	100	36
7. Statistics	1	100	36
8. Public Administration	1	100	36
9. Psychology	1	100	36
10. Sociology	1	100	36
11. Home Science	8	100	36
12. Phalit Jyotish	1	100	36 (Only one of these two can be offered)
13. Samanya Paurohitya	1	100	36

14. Bhasha Vigyan and Sanskrit Bhasha Ka Itihas.	1	100	36
SECOND YEAR EXAMINATION			
<i>Group I—Compulsory :</i>			
1. Samanya Sanskrit	1	100	36
2. General Hindi	1	100	36
<i>Group II—Main Optional : One of the following :</i>			
1. <i>Veda</i> —One of the four vedas viz., Rigveda, Yajurveda, Samveda and Athveda (with practical)	2	200	72
2. Vynakarana	2	200	72
3. Sahitya	2	200	72
4. Samanya Darshana	2	200	72
5. Vedanta	2	200	72
6. Mimansa	2	200	72
7. Nyaya	2	200	72
8. Jyotish	2	200	72
9. Dharmashastra	2	200	72
10. Jain Darshana	2	200	72
11. Buddha Darshana	2	200	72

12. Paurohity	2	200	72
13. Puranetihas	2	200	72
<i>Group III—Optional : Any two of the following :</i>			
1. Hindi Literature	1	100	36
2. English Literature	1	100	36
3. Foreign Language (German or French or Russian or Persian)	1	100	36
4. History	1	100	36
5. Political Science	1	100	36
6. Economics	1	100	36
7. Statistics	1	100	36
8. Public Administration	1	100	36
9. Psychology	1	100	36
10. Sociology	1	100	36
11. Home Science	1	100	36
12. Phalit Jyotish	1	100	36
13. Samanya	1	100	36
14. Bhasha Vigyan and Sanskrit Bhasha ka Itihas	1	100	36

1.	2.	3.	4.
FINAL YEAR EXAMINATION			
<i>Group I—Compulsory :</i>			
1. Samanya Sanskrit	2	200	72
<i>Group II—Main Optional : One of the following :</i>			
1. <i>Veda</i> —One of the four vedas viz., Rigveda, Yajurveda, Samveda and Atharveda (with practical)	2	200	72
2. Vyākarna	2	200	72
3. Sahitya	2	200	72
4. Samanya Darshana	2	200	72
5. Vedānta	2	200	72
6. Mimāṃsa	2	200	72
7. Nyāya	2	200	72
8. Jyotiṣh	2	200	72
9. Dharmashastra	2	200	72
10. Jain Darshana	2	200	72
11. Buddha Darshana	2	200	72
12. Paurāṇīya	2	200	72
13. Purāṇetihas	2	200	72

*Group III—Optional : Any two of the following :*

1. Hindi Literature	1	100	36
2. English Literature	1	100	36
3. Foreign Language (German or or Russian or Persian).	1	100	26
4. History	1	100	36
5. Political Science	1	100	36
6. Economics	1	100	36
7. Statistics	1	100	36
8. Public Administration	1	100	36
9. Psychology	1	100	36
10. Sociology	1	100	36
11. Home Science	1	100	36
12. Phalit Jyotish	1	100	36
13. Samanya Paurohitya	1	100	36
14. Bhasha Vigyan and Sanskrit Bhasha ka Utthas,	1	100	36

## ACHARYA EXAMINATION

1. O.329M-24 be re-written as follows :

*O.329M-24 :*

The examination for the degree of Acharya will consist of specialised courses in the following subjects :-

- (1) One of the 4 Vedas (with practical on each)
- (2) Vyakarana
- (3) Sahitya
- (4) Samanya Darshana
- (5) Vedanta
- (6) Mimansa
- (7) Nyaya
- (8) Jyotish (with practical)
- (9) Jain Darshana
- (10) Buddha Darshana
- (11) Paurohitya (with practical)
- (12) Dharmashastra
- (13) Puranetihas
- (14) Agama
- (15) Vastu & Shilp
- (16) Pali & Prakrit

N. B. : Literary and Cultural History of Ancient India and comparative Philology will form a compulsory part of the courses of each subject.

2. Introduce the following new O.329M-25 and re-number the existing O.329M-25-regarding Vidya-Varidhi Examination as O.329-M-26 :—

*O.329M-25*

A candidate who has passed the Acharya Examination of the University or the Acharya Examination conducted by the Registrar, Departmental Examinations, Rajasthan in any subject shall be eligible to appear or examination in another subject not taken by him at the said examination and, if successful, will be awarded a degree to that effect; provided that :



- (a) A candidate who has already passed Acharya Examination with Vyakarna or Nyaya shall be eligible to offer Sahitya or Dharmashastra or Samanya Darshana or Jain Darshana or Buddha Darshana only.
- (b) A candidate who has already passed Acharya examination with Samanya Darshana shall be eligible to offer Dharmashastra or Jain Darshana or Buddha Darshana only.
- (c) A candidate who has already passed Acharya Examination in any subject except Vyakarana, Nyaya or Samanya Darshana shall be eligible to offer any subject for the Acharya Examination or the University other than the subjects of Veda, Vyakarna, Nyaya, Jyotish and Mimansa.

3. R.43-C (1) be re-written as follows :—

#### R-43-C (1) : ACHARYA EXAMINATION

For Acharya Part I and Part II Examinations candidates must obtain for a pass at least 36% marks in the aggregate in each subject with at least 25% marks in each individual paper. if a candidate fails to secure 25% marks in each individual paper, he will be declared to have failed in the examination notwithstanding his having obtained the minimum percentage of marks required in the aggregate. No division shall be awarded on the result of Part I Examination. The division shall be awarded on the basis of the combined marks of part I and Part II Examinations as noted below :

First Division	60%
Second Division	48%
Third Division	36%

Each candidate for the Acharya Degree will be required to offer 8 compulsory papers, each carrying 100 marks and of 2 hours duration. Of these eight papers, three will be compulsory for all the subjects. The remaining five papers will be in the subject of specialization. A candidate shall offer two compulsory papers and two papers of the subject of specialization for the Previous Examination and one compulsory paper and 3 papers of the subject of specialization for the Final Examination.

Where a Dissertation is prescribed for Acharya Part II Examination, a candidate will be allowed to offer the same in

lieu of a paper if he has secured at least 55% marks in the aggregate at the Acharya Part I Examination. Only a regular student of an affiliated college will be permitted to offer dissertation. The rules for dissertation shall be as follows :

- (a) The dissertation will be written under the guidance of a person who shall be the Principal or Head of a Post-graduate Department or a Senior teacher teaching post-graduate classes nominated by the Principal.
- (b) Not more than 2 candidates shall be permitted to work under a guide.
- (c) The topic for dissertation shall be decided by the Principal in consultation with the Head of the Department concerned by the 10th August at the latest. The topics offered for dissertation by the candidates shall be intimated by the Principal of each college to the Convener, Board of Studies in Sanskrit Studies by the 20th August who will see that the same topic is not offered by more than one student. If the same topic is being offered by more than one student, the Convener will allow that topic to be offered by the student in respect of whom he received the intimation first. The Convener will be expected to convey his approval to the topics for dissertation to the Principal concerned by the 31st August.
- (d) The dissertation shall be type-written in not less than 75 and not more than 100 foolscap size pages.
- (e) Three copies of the dissertation will be forwarded by the student through his Guide and the Principal of the college to the University by the 15th March.
- (f) The dissertation shall be examined by two external examiners and if there is any variation in the marks awarded by them, the mean of the two awards shall be taken which shall be treated as the marks obtained by the candidate.
- (g) The Guide shall devote at least one hour per week to the student for dissertation and maintain a proper record of attendance of the student.

## ACHARYA PART I EXAMINATION :

*Compulsory Papers*—Common for Acharya Part I Examination in all the subjects.

## Paper I : Vedic Sahitya tatha Tulnatmak Bhasha Vigyan

(A) (i) : Vedic	35 marks )	
(ii) : Nirukta	15 marks )	
(B) (i) : Bhasha Vigyan	35 marks )	100 marks
(ii) : Sanskrit Bhasha ka Itihas	15 marks )	

Sanskrit Sahitya tatha Tulnatmak  
Bhasha Vigyan.

(A) (i) : Sanskrit Sahitya	30 marks )	
Gadya Padya	)	
(ii) : Natak	20 marks )	100 marks
(B) (i) : Bhasha Vigyan	35 marks )	
(ii) : Sanskrit Bhasha ka Itihas.	15 marks )	

*Notes*—(1) Candidates appearing at the Acharya Examination in Veda shall offer the paper on 'Sanskrit Sahitya tatha Tulnatmak Bhasha Vigyan.'

(2) Candidates appearing at the Acharya Examination in Vyakarna or Sahitya or Samanya Darshana or Vedanta or Mimansa or Nyaya or Paurohitya or Dharma Shastra or Puranetihas or Agama shall offer the paper on 'Vedic Sahitya tatha Tulnatmak Bhasha Vigyan'.

(3) Candidates appearing at the Acharya Examination in Jain Darshana, or Buddha Darshana or Jyotish or Vastu and Shilp or Pali and Prakrit shall be allowed to offer any of the above alternative papers.

## Paper II — Prachin Bharat ka Sahitya-ka-tatha Sanskrit ka Itihasa.

(A) : Vedic Sahitya ka Itihas.	25 marks )
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(B) : Laukik Sanskrit	35 marks	) 100
Sahitya ka Itihasa.		) marks
(C) : Sanskrit ka Itihasa.	40 marks	)

*Papers of the subject of Specialization.*

Paper III )

Paper IV ) As laid down in the syllabus.

## ACHARYA PART II EXAMINATION;

*Compulsory Paper*—Common for Acharya Part II Examination in all the subjects.

Paper I—“Bharatiya Dharma evam Darshana”

Dharma		30 marks	)
Darshana	)		)
(Sankhya Nyaya,	)	70 marks	) 100 marks
Vedanta)	)		)
(Charvaka Bauddha	)		
tatha Iain)	)		

OR

“Sanskrit Sahitya”

Sanskrit Sahitya	50 marks	)
(Gadya, Padya)		) 100
Natak	25 marks	) marks
Pali तथा Prakrit	25 marks	)

Note:—(1) Candidates appearing at the Acharya Examination in Samanya Darshana or Nyaya or Vedanta or Mimansa or Jain Darshana or Bauddha Darshana or Dharma Shastra shall offer the paper on ‘Sanskrit Sahitya’.

(2) Candidates appearing at the Acharya Examination in Veda or Vyakarna or Sahitya or Jyotish or Paurohitya or puranetihas or Agama shall offer the paper on ‘Bharatiya Dharma evam Darshan’.

(3) Candidates appearing at the Acharya Examination in Vastu and Shilp or Pali and Prakrit shall have the option to offer any one of the two alternative courses in paper I.

*Papers of the subject of Specialization.*

Paper II )

Paper III ) As laid down in the syllabus.

Paper IV )

Note :— Candidates who have passed Acharya Part I Examination of the University in 1971 shall be eligible to appear at the Acharya Part II Examination of 1972 under the Ordinances and Regulations in force during the session 1970-71. The scheme of examination and the syllabus for Acharya Part II Examination of the University to be held in 1972 shall be the same as prescribed by the Registrar, Departmental Examinations, Rajasthan for the Departmental Examination of 1971.

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MINUTES OF THE MEETING OF THE SYNDICATE  
HELD ON 17TH APRIL, 1971 AT 10.30 A.M. AT  
THE UNIVERSITY OFFICE, JAIPUR.

Present

Prof. P.L. Bhatnagar, Vice-Chancellor

*(In the Chair).*

2. Dr. B.N. Consul.
3. Shri D.C. Swami.
4. Prof. G.C. Pande.
5. Prof. G.S. Sharma.
6. Dr. G. Narayanan.
7. Shri K.C. Bakiwala.
8. Dr. K.C. Khanna.
9. Prof. K.L. Varma.
10. Principal M.L. Agrawal.
11. Principal M.L. Bhargava.
12. Dr.M.P. Mathur.
13. Principal P.N. Mathur.
14. Principal (Mrs.) Rama Kochar.
15. Principal S.C. Tela.

Shri L.P. Vaish, Offg. Registrar.

Before proceeding with the business on the agenda the Vice-Chancellor on behalf of the Syndicate and on his own behalf accorded a cordial welcome to the new member Principal M.L. Bhargava, Government Ayurvedic College, Jaipur.

1. The Syndicate *confirmed* the minutes of—(i) its meeting held on 10th March, 1971 and (ii) its emergency meeting held on 27th March, 1971, with the following modification :

*Ref : Resolution No. 2 (ii) dated 10.3.1971 :*

*Substitute*—"the Directors of Physical Education, the Assistant Directors of Physical Education and the Coaches" for "them".

2. With reference to the Resolution of the Syndicate passed at its emergency meeting held on the 27th March, 1971 nominating, under Section 12 (1) (i) of the University Act, Dr. C.D. Deshmukh, Ex. Chairman, University Grants Commission, to serve on the Committee to be constituted under Section 12(6) of the University Act in connection with the appointment of successor to the Vice-Chancellor Prof. P.L. Bhatnagar, the Vice-Chancellor reported receipt of a telegram on 7th April, 1971 from Dr. Deshmukh regretting his inability to serve on the Committee owing to his heavy engagements in the South.

*Resolved that* Dr. M.C. Chagla, former Union Minister of Education, be *nominated* under Section 12 (i) (i) of the University Act to serve on the Selection Committee for the appointment of a successor to Prof. P.L. Bhatnagar.

3. The Syndicate considered a letter No. UDZ/22/2806 dated the 10th March, 1971 from the Head of the University Department of Zoology proposing that Prof. S.L. Ramaswamy be retained as Emeritus Professor for a tenure of three years after the expiry of the period of his re-employment in the University on 30th June, 1971.

In this connection the Registrar reported that.

- (i) Prof. Ramaswami had received an offer of Emeritus Professorship from Shri Venkateswara University, Tirupati for a period of three years on an honorarium of Rs. 10,000,—per year (the Univ. Grants Commission having agreed to pay Rs. 6,000,—under its scheme of utilisation of the services of retired teachers and the balance to be paid by the University) and rent free accommodation.

(ii) Prof. Ramaswamy had indicated his willingness to stay in this University as Emeritus Professor for a period of three years on an honorarium of Rs. 6,000/-per year and a contingency grant of Rs. 1,500/-to be paid under the U.G.C. Scheme of retired teachers, rent free accommodation (the house in which he is living).

(iii) The University Grants Commission had been moved for an award in favour of Dr. Ramaswami under the scheme of retired teachers for working at this University, and a reply from the Commission was awaited.

*Resolved that* the services of Prof. L.S. Ramaswamy be availed of by the University under the U.G.C. Scheme of utilisation of the services of retired teachers subject to the approval of the University Grants Commission, and he be provided with rent free accommodation (the house in which he is living).

4. The Syndicate *postponed* consideration of the recommendation of the Consultative Committee appointed by the Vice-Chancellor for examining the pay fixation case of Dr. R.P. Sharma, University Reader in Hindi.

5. With reference to its Resolution No. 8 dated the 14th August, 1970 accepting the recommendation of the Committee held on the 16th July, 1970 for suggesting a scheme for efficient teaching of the subject of General Education, the Syndicate postponed consideration of the recommendations of the Committee made at its meeting held on 3rd February, 1971.

6. With reference to its Resolution No.3 dated the 17th November, 1969 adding a note under Statute 20 of the University Hand Book Pt. II to provide for creation of higher post, ex-cadre, for the teachers, the Syndicate considered a proposal from Dr. B.L. Saraf, Prof. & Head of the University Department of Physics as contained in his letter No. Confdl/



Phy/71/512 dated 20th February, 1971 to the effect that proper consideration be given to the scheme of ex-cadre promotions so as to provide for such promotions right from Lab. Bearers to the Professors level.

*Resolved that* the proposal of Dr. Saraf be recorded with the observation of the Syndicate that the same was rather pre-mature.

7. The Syndicate considered the recommendations of the Selection Committee constituted under S.20 of the Univ. Hand Book Pt. II for the selection of teachers in the following subjects, made at their meetings held on the dates noted against each.

Subject	Post	Date	Vide Appendix
1. Law	Lecturer	16-3-71	I
2. Geology	Readers	17-3-71	II
3. Zoology	Lecturer	15-4-71	III

*Resolved that* (i) the recommendations of the Selection Committees at serial Nos. (1) and (3) above in respect of appointment to the post of Lecturer in Law and Zoology be accepted and (ii) the recommendation of the Selection Committee in respect of appointment to the post of Readers in the University Department of Geology be referred back to the Selection Committee.

8. The Registrar reported that (i) extension in service granted to Shri Nathu Ram, Daftry in the Central Office after he had attained the age of superannuation would expire on 15th May, 1971, (ii) he was reported to be in a fit state of health and (iii) he was entrusted with work connected with the Examinations & Secrecy Sections and was discharging his duties efficiently and with integrity.

*Resolved that* under the provisions of O.376 F of the Univ. Hand Book Pt. II one year extension in service be granted to Shri Nathu Ram, Daftri w.e.f. 16th May, 1971.

9. The Syndicate considered letter No. 20, Senior Scale posts, dated the 16th March, 1971 from the General Secretary Rajasthan University Teachers Association, Jaipur regarding running grade for the University teachers.

*Resolved that* (i) the aforesaid letter be referred to the Committee appointed under the convenership of Prof. R.C. Mehrotra (Vide Spndicate Res. 6 dated 14-12-1970) and (ii) the names of Prof. P.N. Srivastava and Prof. Raj Krishna be added to the membership of the Committee.

70. The Syndicate considered an office proposal that an employee returning to the place of his/her duty after availing leave sanctioned to him/her be permitted to rejoin duty on the date of actual arrival at the duty station irrespective of whether the day was a holiday or Sunday provided that the employee reported his/her arrival to the concerning Head of Department/Office in the forenoon.

*Resolved that* the aforesaid office proposal be accepted.

11. The Syndicate considered the recommendations of the Standing Consultative Committee regarding the fixation of pay of Shri R.S. Pushkarna, Assistant Registrar (Secrecy). (Vide Appendix-IV).

*Resolved that* the recommendations of the aforesaid Committee be accepted.

12. The Syndicate considered the request of Dr. Y.K. Gupta, University Reader in Chemistry for the grant of study leave from 1.8.1971 to 31.3.1972 for further studies/research work.

*Resolved that* consideration be postponed and meanwhile Dr. Gupta be requested to give the complete programme of his research work during the period of leave applied for.

13. The Syndicate considered the recommendations of the Committee appointed by the Vice-Chancellor to go into the case of pay-fixation of Dr. S.N. Pareek, Medical Officer, University Health Centre, Jaipur (*vide Appendix-V*).

*Resolved that* (i) the recommendation of the Committee in regard to the fixation of pay of Dr. Pareek be accepted and (ii) the conveyance allowance of Rs. 60/- p.m. which was being paid to Dr. Pareek on an adhoc basis *vide* Syndicate Res. 32 dated 4.5.66 be sanctioned to be paid to him on a regular basis.

14. The Syndicate resolved to place on record its deep sense of appreciation of the valuable services rendered by Prof. P.L. Bhatnagar to the University during his term as Vice Chancellor.

The Syndicate *further resolved* to request to Chancellor to give the benefit to the Vice-Chancellor Prof. P.L. Bhatnagar of such leave as was due to him.

(Before this resolution was moved the Vice-Chancellor had left the meeting and the members requested Prof. G.C. Pande to take the Chair.)

#### SECTION 'B'

15. The following orders of the Vice-Chancellor were reported to the Syndicate :

- (i) Orders dated 17.3.1971 granting house rent allowance to Shri Nait Ram Sharma, University Lecturer in Law w.e.f. 1.1.1970 the date from which the revised rules were brought into force.
- (ii) With reference to Syndicate Resolution No. 11 dated 10th March, 1971 confirming Vice-Chancellor's orders regarding the appointment of Shri L.P. Vaish as Offg. Registrar vice Shri C.L. Singhal who proceeded on leave preparatory to retirement, *further orders* sanctioning payment of an official-

ing allowance Rs. 150/- p.m. to Shri L.P. Vaish w.e.f. 25th February, 1971 till permanent arrangements were made, and distributing the work of the Establishment and G.A.D. Sections between Shri S.L. Ajmera, Dy. Registrar (A & F) and Shri J.N. Mathur, Deputy Registrar (Academic) and sanctioning each of them an extra duty allowance Rs. 100/-p.m. each w.e.f. 25.2.1971, vice Shri L.P. Vaish.

*Resolved that the aforesaid orders of the Vice-Chancellor be confirmed.*

*(Examinations & Secrecy Sections)*

SECTION 'A'

16. *Resolved that as unanimously recommended by the referees the degree of Ph.D. of the University be conferred upon the following candidates on the subjects noted against each :*

<i>S.No.</i>	<i>Name</i>	<i>Subject</i>
1.	(Miss) Sushila Solanki	"Mahakavi Bilhana-life and Works."
2.	Shri Raj Kumar Tyagi	"Fort towns of Western Uttar Pradesh."
1.	Shri Abhaya Deva Sharma	"हविष्यज-उनकी प्रक्रिया और रहस्य ।"

17. The Syndicate *confirmed* the action taken by the Principal, Government College, Ajmer in expelling the following two candidates from the college for the academic session 1970-71, under the provisions of O.SS (1) (a) of the University Hand Book Part II for reasons of grave misconduct, as intimated vide Principal's letter No. 4218/71 dated the 6th February, 1971, a copy of which had been endorsed to the University :

(1) Shri Ramesh Chandra      LL.B. (I Year)  
Kaushik

(2) Shri Rajendra Singh      II Year Arts  
I Year Arts U.O. 86-A

18. The Syndicate considered whether Shri Prahalad Dutt Audhich, a regular student of Shri Vithal Nath Sanskrit College, Kota be deemed eligible and be allowed to appear at the ensuing Acharya Part I Examination as a special case, as recommended by the Dean, Faculty of Sanskrit Studies vide his letter No. 483/71, dated April 1, 1971.

In this connection the Registrar informed the Syndicate that—(i) the candidate had passed the Kavyatirth Examination of Bengal Sanskrit Education Association which had been recognised by the University for allowing candidates to appear at the Shastri Part I Examination, (ii) the candidate was permitted by the Registrar, Departmental Examinations, Jaipur to appear at the Acharya Part I Examination conducted by it last year under its Rule No. 39 (J) which required inter-alia that the candidates should appear and qualify simultaneously in modern subjects of Shastri Examination, (iii) the candidate accordingly appeared but failed at Acharya Part I Examination of 1969 conducted by the Department, but he qualified modern subjects of Shastri Examination conducted by the Department in the same year viz., 1969.

*Resolved that* Shri Prahalad Dutt Audhich be allowed, as a special case, to appear at the ensuing Acharya Part I Examination of the University.

19. The Registrar reported that :

- (i) On the 6th April, 1971 when the examination in Political Science Part II for the Final Year T.D.C. Arts examination was scheduled to be held in the morning session, a telephonic message was received from the Centre Superintendent, Govt. Girls College, Sri Ganganagar intimating that a huge

crowd of boy students entered the Examination Centre and disturbed the girl students taking the examination. The Principal intimated that, according to the students, the question paper was out of the prescribed syllabus and that they had walked out of their Examination Centre in protest. Similar telephonic message was received from the Centre Superintendent, Govt. Boys College, Sri-Ganganagar.

- (ii) Reports in writing had been received from all the 3 Centre Superintendents of Sri Ganganagar, namely, Government Boys College, Government Girls College and Seth G.L. Behani S.D. College about the boycotting of the examination in the aforesaid paper by the students enmasse in protest against the question-paper being out of the prescribed syllabus.
- (iii) No such walk-out was reported from any other Centre though similar complaints against the question-paper being out of the syllabus were received from the Superintendents of local as well as outside Centres.

In this connection the Registrar pointed out to the Syndicate about the ambiguity contained in the syllabus (1968 edition) prescribed for Pol. Sc. Paper II—‘International Relations’ for the Final Year T.D.C. Examination of 1971 in regard to the period to be covered—whether from 1919 and onwards or from 1945 and onwards, and that for this very reason the Paper-setter had already been requested to set 12 questions instead of 10 normally set so as to safeguard the interest of the examinees. The question paper contained 9 questions covering the period from 1945 onwards out of which the candidates could conveniently select the requisite number of questions viz., 5 for answering.

*Resolved that* (i) the report be recorded and (ii) arrangements be made for the re-examination of the candidates of

the aforesaid three Centres of Sri Ganganagar in Political Science Paper II of the Final Year T.D.C. Examination.

### SECTION 'B'

20. The Registrar reported the following orders of the Vice-Chancellor :

- (i) Orders dated 23.3.1971 postponing the date of commencement of Engineering Examinations so as to commence from Monday April 12, 1971 instead of Monday, April 5, 1971 in view of the circumstances explained by the Principal, Malaviya Regional Engineering College, Jaipur vide his letter No. PA/Acdm/70 dated 18.3.1971.
- (ii) Orders passed on the recommendation of the Dean, Faculty of Ayurveda as contained in his letter dated 10.3.1971, to the effect that in the case of such successful candidates as had been exempted from appearing in Sanskrit/Science subjects at the Pre-Ayurveda Examination, 1971 under the provisions of O.329 N-3, only a pass class be awarded.
- (iii) Orders dated 5.3.1971 allowing one extra Addl. Superintendent in addition to the Superintendent and Additional/Assistant Superintendent, as the case may be as per rules, to assist the superintendent for the days when three shifts viz., from 7 a.m. to 10 a.m. in the morning, from 11 a.m. to 2 p.m. in the noon and from 3.30 p.m. to 6.30 p.m. in afternoon sessions would run concurrently at degree centres with effect from 19th April to 12th May, 1971 and payment of honorarium to them at the following scale which was prescribed for the First Year T.D.C. Examinations.
  - (1) Superintendent Rs. 9/- (In addition to his normal honorarium for the two sessions.)

(2) Addl. Supdt., Rs. 7.50 per session.

- (iv) Orders dated 1.4.1971 in raising the maximum limit of the amount of remuneration, which any person acting as an examiner/Tabulator/Checker etc. can draw from this University, by 25% of the existing amount as a corollary to the increase of 25% in the rates of remuneration sanctioned vide Syndicate Res. No. 4 dated the 6th March, 1969.
- (v) Orders dated 26.3.1971 entertaining the application forms of (Miss) Heera and (Miss) Purnima Chakravarty, regular students of Maharani's College, Jaipur for appearing at the Ist Year T.D.C. Arts and II Year T.D.C. Arts examination of 1971, respectively after expiry of the last date, in view of the peculiar circumstances, as explained by the Director, Maharani's College vide her letter No. 6977 dt. 23.3.1971.

*Resolved that the aforesaid orders of the Vice-Chancellor be confirmed.*

### (ACADEMIC SECTION)

#### *Section 'A'*

21. With reference to its Resolution No. 22 dated the 14th December, 1970 referring the recommendations of Dr. Khanna Committee in regard to the minimum pay scales for Librarians and the Physical Training Instructors of the affiliated colleges, to the Committee appointed by the Academic Council vide its Res. No. 22 dt. 28.10.70- (for considering the question whether the Directors/Asstt. Directors of Physical Education and Coaches could be treated as teaching posts) the Syndicate considered the recommendations made by the committee at its meeting held on 6.2.1971 as contained in paras Nos. 4,5,6 and 7 of the report (vide Appendix-VI).

*Resolved as follows :*

- (I) The minimum pay scales as recommended by Dr.



Pande Committee vide para 6 of its report be accepted with a proviso that in the case of present incumbents possessing at least 5 years experience the condition of obtaining the Master's degree in First or Second class will be waived for the purpose of making them entitled to the higher scale of pay both in the case of Physical Training Instructors and Librarians.

- (II) While communicating these pay scales to the colleges for implementation they may be informed that the present incumbents be given the higher scale of pay as and when they improve their qualifications so as to be in conformity with those prescribed for that scale of pay.
- (III) The suggestion of Dr. Pande Committee as contained in para 7 of its report be agreed to and referred to Dr. Khanna Committee.
- (IV) The existing provisions at sl. nos. G and H of O.66 be replaced by the following :

O.66 :

(G) *For Physical Training Instructors in the Affiliated Colleges :*

- |   |                            |
|---|----------------------------|
| (A) For those who possess a Bachelor's Degree in Physical Education or Bachelor's Degree with Diploma in Physical Education (at least one year course). | Rs. 300-25-50-<br>-30-640  |
| (B) For those who possess either a First or Second Class Master's Degree in Physical Education or a First or Second Class                               | Rs. 375-25-550-<br>-30-850 |

Master's Degree in Arts  
/Science/Commerce with  
a Diploma in Physical  
Education (at least one  
year course).

*N. B.* The condition of having obtained a First or Second Class at the Master's Degree examination will be waived in the case of present incumbents if they possess at least 5 years experience as Physical Instructors in a degree or post-graduate college.

*(H) For Librarians in the Affiliated Colleges :*

(A) For those who possess a Bachelor's Degree with a Degree or Diploma in Library Science (at least one year course).	Rs. 300-25-550- 30-640
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(B) For those who possess either a First or Second class Master's Degree in Library Science or a First or Second class Master's Degree in Arts /Science/Commerce with a Diploma in Library Science (at least one year course).	Rs. 375-25-550- 30-850
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*N B.* The condition of having obtained a First or Second class at the Master's Degree examination will be waived in the case of present incumbents if they possess at least 5 years experience of Librarianship in a degree or post-graduate college.

22. With reference to the Rules approved by the Syndicate for charging of tuition and other fees in the non-Government affiliated colleges, the Syndicate considered letter No.

F. 2/70-71/ Sc./ 394 dated 14th March, 1971 and No. F. 2/SC/70-71,454 dated 9th April, 1971 from the Principal, Sophia Girls College, Ajmer requesting that the college be allowed to charge fees from the students and hostellers as per details given in her aforesaid letters in view of the following :

- (i) The college was run by a band of Indian religious women who had dedicated their lives to God and to the service of the country in imparting higher education to young women,
- (ii) A uniform tuition fee of Rs. 20/- p.m. was levied for all the classes and for all categories of students irrespective of income group, and
- (iii) Some freeships and half freeships were also allowed by the College.

*Resolved that* the Principal, Sophia Girls College, Ajmer be permitted to charge tuition and other fees (including hostel fees) as per details given in her letters cited above, as a special case, till such time as the name of the college was not included in its grant-in-aid list by the State Government.

23. With reference to its Res. No. 32(ix) dated the 14th August, 1970 appointing a Committee to examine the observation of the Senate made vide its Res. No. 3 dated 21.3.1970 for permitting the representatives of teachers as visitors in the meetings of decision making bodies of the University, the Syndicate considered the recommendations dated 9th March, 1971 of the aforesaid Committee (*Vide Appendix-VII*).

*Resolved that* the recommendations of the aforesaid Committee be accepted.

24. With reference to its Resolution No. 33 dated 4th July, 1970 under which it was decided that conveyance allowance of Rs. 5/- for each day of meeting/meetings be paid to such local members of the various University bodies as were not employees of the University or its affiliated colleges, the Syndicate considered a proposal of Principal M.L. Agarwal, Member-Syndicate as contained in his letter dated the 10th March, 1971 to the effect that conveyance allowance @

Rs. 5,- per day for attending the meeting of various University bodies be paid to those local members also who were working in the affiliated colleges of the University.

*Resolved that* the aforesaid proposal of Principal Agarwal be *referred* to to Finance Committee.

25. With reference to its Res. No. 22 dated the 10th March, 1971 the Syndicate again *postponed* consideration of the proposals of Prof. K.L. Varma, Member-Syndicate as contained in his letter No. 10 dated 2nd February, 1971 regarding amendments to O.375-F and O.376-F-1 of the University Hand Book Part II.

26. The Syndicate considered a request of the Secretary, Society for Geographical Studies, Kanpur as contained in his letter No. nil dated the 22nd Feb., 1971 for recognising the Society for the purpose of deputing delegates.

*Resolved that* consideration of the aforesaid proposal be *postponed* and meanwhile the views of the Dean, Faculty of Arts and the Head of the University Department of Geography be obtained in the matter.

27. The Syndicate considered the applications of following teachers for exemption from the minimum qualifications duly forwarded by the Director of Education, Rajasthan vide his letter No. F. 26 (A) (26) Estt/DCE/70 dated the 8th March, 1971 :—

S. No.	Name & Designation	Purpose for which exemption sought	Deficiency	Remarks
1.	Dr. R. C. Mahendra, Offg. Principal, Govt. College, Sujangarh.	P. G. Head in English	Does not possess I or II class Master's Degree	
2.	Shri Bhawani Puri, Sr. Lecturer in Chemistry, Govt. College, Kishangarh.	P. G. Head in Chemistry & Principal of a Degree College.	—do—	Was granted exemption for Lectureship vide Syndi. Res. No. 6 dt. 18.3.1967
3.	Shri B. P. Bhargava, Lecturer in English, Govt. College, Bhilwara.	Principal of a Degree College	—do—	Was granted exemption for Lectureship vide Syn. Res. No. 2 dt. 3.7.63.
4.	Shri Ramanand Goyal, Senior Lecturer in	Principal of a Degree College.	Does not possess a I or II class	

S. No	Name & Designation	Purpose for which exemption sought	Deficiency	Remarks
	Commerce, Govt. College, Kota.	P. G. Head in Commerce.	Master's Degree.	
			Deficiency noted above <i>plus</i> not possessing at least 3 years experience of Teaching P. G. classes.	

*Resolved that* the aforesaid teachers be granted exemption from the minimum qualifications for the purpose noted against each.

28. The Syndicate considered a request of Dr. C.M. Gupta, University Reader in Chemistry as contained in his letter dated the 3rd March, 1971 duly recommended by the Head of the Department for providing 75% financial assistance towards his air-fare for attending a symposium on 'Biological Aspects of Electro Chemistry' to be held in Rome from 31st May to 4th June, 1971.

In this connection it was reported to the Syndicate that —(i) Dr. Gupta was contributing a paper entitled 'Electro Chemical Studies on the complexes of cadmium with Dithiodipropionic acid at DME in aqueous and equo-nonaqueous media which had been accepted to be included in the programme of the aforesaid symposium and (ii) Return air-fare by economy class for Rome was reported to be about Rs. 5,000/-.

*Resolved that* Dr. C.M. Gupta be informed that 50% air-fare by economy class out of the unassigned grant of the Univ. Grants Commission and 25% air-fare out of the University resources could be granted provided he was prepared to meet 25% air-fare and other expenses himself.

29. With reference to its Res. No. 35 dated 1st Feb., 1971 sanctioning 50% air-fare out of the un-assigned grant of the U.G.C. and 25% air-fare from the resources of the University to Dr. Om Prakash, Director, University School of Commerce so as to enable him to attend the 18th International Meeting of Institute of Management Science held in Washington on March 21-24, 1971, provided that he was able to meet the remaining 25% air-fare from his own resources, the Syndicate considered letter No. R-142 dated 12th April, 1971 from Dr. Om Prakash requesting for payment of 50% return air-fare to him from University resources (instead of only 25% sanctioned to him).

*Resolved that* Dr. Om Prakash be informed with regret that the University was not in a position to provide

more assistance than what had already been sanctioned vide above cited resolution of the Syndicate.

The Syndicate *further observed* that the very fact that Dr. Om Prakash had already availed of the assistance provided to him in this connection implied that he had accepted the conditions as contained in the aforesaid resolution of the Syndicate.

30. The Registrar reported that—(i) a proposal was made to the University Grants Commission in May, 1970 for providing financial assistance of Rs. 3.11 lacs for the period July, 1971 to March, 1974 for starting M.Ed. classes and Research in Education in the University, (ii) the U.G.C. wanted to know whether the State Government was willing to undertake the liability of continuing the staff after cessation of the Commission's assistance at the end of 1973-74, (iii) the State Government had agreed to undertake this liability and (iv) the U.G.C. had been informed accordingly and requested to expedite its decision.

*Resolved that* the report be recorded.

31. The Registrar reported that—(i) the University Grants Commission had instituted a new scheme of National Associateships to assist outstanding University/College teachers below the age of 35 years, engaged in research, to visit and work for short periods at University Centres/Research Institutions/National Laboratories having special facilities relevant to their respective fields of work, (ii) persons selected to participate in the programme would be kept on the National Associateships roll for 5 years and during this period a person could plan to visit the institutions of his choice in India for a maximum of three times, once in a year, for periods of not more than 12 weeks, (iii) the U.G.C. would meet actual cost of travel once each way from his place of work to the host institution and back, and provide an allowance of Rs. 500/- per calendar month to cover the living expenses, and (iv) the parent institution would have to treat the person as on duty when he went out under this scheme.



*Resolved that* the aforesaid report be recorded and (ii) the question of granting duty leave to the University teachers who might be selected to participate in the above programme be referred to the Study Leave Rules Committee the recommendations of which be then placed before the Academic Council.

32. With reference to the Syndicate Resolution No. 16 dated the 16th May, 1970 approving the rules for the scheme of exchange of teachers between the University and its affiliated colleges which require the host institution to meet the travelling expenses and also to make suitable arrangements for the board and lodging of the visiting teacher, the Registrar reported that the Director of Education, Rajasthan had been requested to make suitable provision for the same in the budget of the Directorate, in reply to which he stated vide his letter No. 26(35)Ac/E/70/522 dated the 8th March, 1971 that T.A. & D.A. could be paid to teachers going for academic work from the affiliated colleges to the University, but provision for the University teachers to visit affiliated colleges could not be made by the Government.

In this connection the Registrar further reported that a provision of Rs. 5,000/- existed in the Budget Estimates 1071-72 of the University for the Scheme of exchange of teachers.

*Resolved that* requests of affiliated colleges for deputation of University teachers under the above scheme be considered by the Vice-Chancellor on merits and T.A.— & D.A. be paid to them out of the University resources upto the extent of the budget provision cited above.

33. The Syndicate considered the recommendations of the Board of Inspection made at its meeting held on the 7th April, 1971 (*Vide Appendix VIII*).

In this connection one of the members of the Syndicate observed in the meeting that according to his personal knowledge the Administrator and the Principal of S.S.G.

Pareek Teachers Training College could not place before the Inspection Committee full facts and information about the facilities available in the college.

*Resolved that* (i) the recommendations of the Board of Inspection be accepted, *except* that in connection with the recommendation contained in its Res. No, 29 in regard to the S.S.G. Pareek Teachers Training College, Jaipur, the Inspection Committee which had conducted the Inspection of the college on 25th March, 1971 be requested to inspect the college once again so as enable the college authorities to place full facts and figures before them and (ii) the Inspection Committee be requested to furnish its reports as early as possible, say by the end of this month.

34. The Syndicate considered the application of Shri Sagarmal Derasari, Demonstrator, Shri Bhanwarlal Dugar Ayurveda Vishwa Bharti, Sardarshahr duly forwarded and recommended by the Principal of the College and the Dean, Faculty of Ayurveda, requesting for granting exemption from the minimum qualifications prescribed by the University for the purpose.

In this connection the Registrar reported that :

- (i) The deficiency in the above case was that Sri Derasari possessed Ayurvedacharya Degree from Nikhil Bhartiya Ayurveda Vidyapeeth, Delhi which was not recognised by the University,
- (ii) It was provided in O.65 of the Univ. Hand Book Pt. II that the Syndicate might grant exemption on merits in each case for a period of 5 years (from May, 1967),
- (iii) Exemptions had been granted in the past in similar other cases by the Syndicate,
- (iv) The Registrar, Gandhi Vidya Mandir, Sardarshahar vide his letter dated 26th March, 1971 informed the University that owing to financial stringencies and

insufficient adhoc grant from the Government, the Vidya Mandir did not find itself in a position to fulfil the minimum requirements laid down by the University and expressed inability of the Management to run the college any longer,

- (v) The Board of Inspection vide its Res. No. 27 dated 7.4.1971 recommended that the Management be asked to take steps for closing the Institution in accordance with the provisions of S.26 (8) but if the Management was able to fulfil the obligations towards the employees of the institution and also ensured that all students of the institution were accommodated in the existing colleges, it should send a further request for consideration of the University, and
- (vi) The Syndicate vide its fore-going Resolution No. 33 approved the aforesaid recommendation of the Board.

*Resolved that* consideration of the application of Shri Derasari for exemption from the minimum qualifications be *deferred* till the question of continuance of the college was finally settled.

35. With reference to Statute 26 (5) of the University Hand Book Pt. II according to which every college not maintained by Government should have Selection Committees for the selection of teachers which shall include at least two subject experts and one representative of the University nominated by the Vice-Chancellor, the Syndicate considered a letter dated the 16th March, 1971 from the Principal, Regional College of Education, Ajmer requesting to approve the existing arrangements according to which all appointments to the teaching posts in the college were made by the National Council of Educational Research and Training on the recommendations of Selection Committees consisting of subject specialists from various universities in India and that the recruitment was made by the N.C.E.R.T. on All India basis through advertisement in the press.

*Resolved that* the Regional College of Education, Ajmer be deemed as Government Institution for the purpose of S. 26 (5) of the University Hand Book Part II.

36. The Syndicate considered the following proposals of Prof. K.L. Varma as contained in his letter No. 24 dated the 6th April, 1971.

1. Note 3 under O.141 B and occurring else-where relating to the minimum qualifications of teachers in the University in the various faculties be amended as follows :

Before 'qualifications' add—

“Non-essential.”

2. Courses of Study and the Scheme of Examinations in the Faculty of Law for the Professional degree (Three-Year Course) be revised so as to provide for the following :

“At least six Moot Courts in the Final Year Degree Course so that students may have sufficient practical training to enable them to embark on their professional career with confidence without being required to undergo any further training after qualifying themselves for the Professional Degree. The scheme of examinations be so amended so as to include practical examination at the end of the 3rd year of the course.

3. A regular machinery for assessment of independent research work done (not for a doctorate degree) by teachers in the University and its affiliated colleges be set up by the University and the assessment reported to the Syndicate every year.

*Resolved that* the following Note No. 3 occurring under O.141 B be *deleted* :

“Qualifications are relaxable at the discretion of the Selection Committee in special cases.”

*Resolved further* that proposals Nos. 2 & 3 above be referred to the Board of Studies in Law and the Academic Council, respectively.

37. With reference to the Syndicate Resolution No. 30 dated the 1st February, 1971 read with its Res. No. 1 (ii) dated the 10th March, 1971 approving the recommendations of the Committee appointed for suggesting a revised Teacher Agreement Form for the non-Government affiliated colleges, the Syndicate considered letter No. RUCTA/70-71/101 dated the 10th April, 1971 from the General Secretary, RUCTA (Rajasthan University & College Teachers Association) suggesting certain points for incorporation in the Agreement Forms and appending draft Agreement Forms for approval.

*Resolved that* the suggestions made by the General Secretary, RUCTA and the draft of the Agreement Forms as suggested by him be *referred* to the earlier Committee and Principal M.L. Agrawal be also associated with the Committee.

## (ACCOUNTS & FINANCE SECTION)

### *Section A*

38. The Syndicate considered the office proposal that in view of the fact that under the existing rule difficulties arose where-ever fractions occurred in calculating percentages, the existing Rule No. 1 for grant of freeships and half freeships be amended so as to read as under :—

1. “Concession in tuition fee will be available to the students studying in the University Departments and University Colleges, *as under* : provided that the concession will not be admissible to the students of the Diploma/Certificate Courses :

- |     |  |  |
|-----|--|--|
| (a) | For every batch of<br>5 students in a class.       | 1 half<br>freeship   |
| (b) | For every batch<br>of 6-10 students in<br>a class. | 1 full freeship <i>or</i> in<br>lieu thereof<br>2. half freeships. |

*Resolved that* the aforesaid office proposal be accepted.

39. With reference to its Resolution No. 50 (i) dated 14.8.1970 accepting a donation of Rs. 4,000/—from the Secretary, Rajasthan Canal Board for the award of a gold medal every year to the student who stands first in order of merit at the B.E. (Civil) examination of the University, the Syndicate *approved* the following draft amendment to sub-clause (c) of O.122-A of the University Hand Book Pt. II.

13. Rajasthan Canal Board Gold Medal for B.E. Final (Civil) Examination.”

40. The Syndicate considered the recommendations of the Building Committee made at its meeting held on the 16th March, 1971 (*Vide Appendix IX*).

*Resolved that* the recommendations of the Building Committee be approved.

41. The Syndicate considered the office suggestion that the following note be added below clause (6) to S.41 of the University Hand Book Part II :

“Notwithstanding the provisions of this clause the amount of University contribution in the case of an employee drawing a salary of more than Rs. 500/—p.m. will continue to be paid at the level such contribution was last paid when the employee was in receipt of salary of Rs. 500/—p.m. or less and when such contribution was calculated at the rate of 10%, till the amount of contribution at the applicable rate of 8.1/3% exceeds that amount.”

*Resolved to recommend to the Senate* that the addition of the aforesaid note under clause (6) of S.41 be approved.

42. The Syndicate considered an office proposal that in partial modification of its Resolution No.20 dated 7th March, 1970 payment of arrears of pay and allowances to non-teaching employees of the University for the period from 1.9.1968 to 31.3.1969 arising out of fixations made in the New Pay Scales (involving an expenditure of Rs. 50,000/—approximately) be made out of the surplus fund now available with the University.

*Resolved that* the aforesaid office proposal be accepted.

43. With reference to the Syndicate Resolution No. 8 dated 2nd May, 1969 and further Resolution No. 33 dated 16th May, 1970 revising the pay scales of certain categories of the non-teaching staff viz., Press Manager, Director—SAB, Assistant Registrars, Dy. Registrars, Administrative Secretary to the Vice-Chancellor and the Registrar (the pay scales of the non-teaching staff in the ministerial and class IV cadres having already been revised), the Vice-Chancellor informed the Syndicate that—(i) fixation of pay of these officers in the revised pay scales was kept pending in the hope that the State Government would convey its decision, (ii) he had finally written to the Education Minister on 5th April 1971 (vide his D.O. letter No. 581/VC/71/7564/A&F) that he did not find any justification in not implementing the decision taken by the Syndicate and that the financial implications of the proposal were paltry (amounting to Rs. 2,000/—p.m. only) and (iii) the Syndicate intended to implement the decision in view of the fact that revision of pay scales pertaining to all categories of staff except the above had already been made.

*Resolved that* (i) the information given by the Vice-Chancellor be recorded and (ii) pay of the aforesaid officers be fixed in the revised pay scales in terms of Syndicate Resolutions No. 8 dated 2nd May, 1969, No. 33 dated 16th May, 1970 and the foregoing Resolution No. 42 of these minutes.

44. The Syndicate considered the recommendations dated 5th April, 1971 of the Provident Fund Committee constituted by the Syndicate in terms of S.41 of the University Hand Book Part II (*Vide Appendix X*).

*Resolved that* the recommendations of the P.F. Committee be approved.

45. The Registrar reported orders dated 14th Nov., 1970 of the Vice-Chancellor accepting a donation of Rs.4250/- from Shri K.C. Shah, Kamani Charity Trust, Near Rly. Station, Jaipur for the award of a gold medal to be named as 'Jaipur Metals and Electricals Limited Gold Medal' to the candidate standing first in order of merit at the B.E. Final (Electrical) Examination of the University.

*Resolved that* (i) the orders of the Vice-Chancellor be confirmed and (ii) the following amendment be made to the relevant O.122-A of the Univ Hand Book Pt. II :

“Add under sub-clause (c) of O.122—A—

14. Jaipur Metals and Electricals Limited Gold Medal  
For B.E. Final (Electrical) Examination.”

### SECTION (B)

46. The Syndicate *confirmed* the following orders of the Vice-Chancellor :

With reference to Syndicate Resolution No. 38 dt. 10th March, 1971, approving the recommendations of the Finance Committee dt. 27.2.1971, orders dated 10.4.1971 sanctioning adhoc relief to the employees of the University w.e.f. 1.1.1971 at the rates as mentioned below :

<i>Pay</i>	<i>Amount of adhoc relief per month</i>
Below Rs. 110/—	Rs. 10/—



12. Shri Narendra Singh, Morena, and
13. Shri Sushil Kumar, Delhi.

(a) None found suitable for permanent appointment.

(b) The following may be considered for temporary appointment in order of preference :

(i) Shri G.S Saraf                      LL.B. 1968 II 56%,  
   LL.M. 1970 II 54%,  
   Teaching experience  
   4 months.

(ii) Shri Niranjan Lal  
      Gupta :                              LL.B. 1961 II  
   LL.M. 1969 II 51%.

(iii) Shri Satyendra Kumar  
      Gupta :                              LL.B. 1963 II  
   LL.M. 1965 II 54%,  
   Teaching experience :  
   5 months.

Sd/—P.L. Bhatnagar.

Sd/—K.P. Rohtagi.

Sd/—S. Dayal.

Sd/—Swami Dinesh Chandra.

Sd/—G.S. Sharma.

## APPENDIX-II

(Ref :—Res. No. 7 of Syndicate dated 17th April, 71)

Minutes of the Meeting of the Selection Committee for the selection of Readers in Geology held on Wednesday the 17th March, 1971 at 10 A. M. in the Syndicate Hall of the University Central Office.

The following were present :—

- |  |                            |
|--|----------------------------|
| Dr. P.L. Bhatnagar,<br>Vice-Chancellor.  | Chairman.                  |
| 2. Dr. G. Narayanan, Jaipur.   | Member, Syndicate.         |
| 3. Dr. M.W. Chaudhary,<br>Prof. and Head of the<br>Deptt. of Geology,<br>Unvy. of Rajasthan,<br>Udaipur. | Head of the<br>Department. |
| 4. Dr. I.C. Pandey,<br>Prof. and Head of the<br>Deptt. of Geology<br>Panjab University,<br>Chandigarh.   | } experts                  |
| 5. Dr. S.K. Agarwal<br>Deptt. of Geology,<br>Banāras Hindu University.<br>Varanasi.                      |                            |

Note:— Dr. P.N. Mathur, Dean, Faculty of Science Principal, Government College, Ajmer) could not attend the meeting.

Out of the 20 candidates called for interview, the following eleven appeared before the Selection Committee:—

1. Dr. Ashok Madho Patwardhan, Chandigarh
2. Dr. Ashit Baran Roy, Udaipur.
3. Dr. Bhanwar Lal Sharma, Udaipur.
4. Shri G.V. Damle, Udaipur.
5. Dr. N.C. Ghose, Patna.
6. Shri Mathuresh Behari Mathur, Jaipur.

7. Shri Nemi Chand Jain, Jaipur.
8. Dr. R.S. Chaudhuri, Chandigarh.
9. Dr. Vishnu Dutta Choubey, Kurukshetra.
10. Dr. A.V. Ulabhaje, Varanasi.
11. Dr. S.C. Khosla.

The following are recommended for appointment in order of preference :—

1. Dr. Ashit Baran Roy—

M.Sc. 1961—Ist.

Ph.D. 1962

Papers published : 12

Teaching Experience : 6 years.

2. Shri N.C. Jain—

M.Sc. 1953-II Dn—First position  
in the University.

Teaching Experience :—

Post-graduate : 4	} years.
Total 16	

The Geological mapping done by him is a fine piece of field work.

He has good all round knowledge and good exposition.

Sd/—G. Narayanan.

Sd/—P.L. Bhatnagar.

Sd/—S.K. Agarwal.

*Vice-Chancellor.*

Sd/—M.W. Chaudhari.

## APPENDIX-III

(Ref:—Res. No. 7 of Syndicate dated 17th April, 1971)

Minutes of the meeting of the Selection Committee for the selection of Lecturers in Zoology held on Thursday the 15th April, 1971 at 10 a.m. in the Syndicate Hall of the University Central office.

The following were present :—

- |                           |                     |
|---------------------------|---------------------|
| Dr. P.L. Bhatnagar,       | Chairman.           |
| Vice-Chancellor.          |                     |
| 2. Dr. P.N. Mathur,       | Dean,               |
| Principal, Govt. College, | Faculty of Science. |
| Ajmer.                    |                     |
| 3. Dr. G. Narayanan,      | Member, Syndicate.  |
| Jaipur.                   |                     |
| 4. Dr. P.N. Srivastava,   | Head of the         |
| Prof. & Head of the       | Department.         |
| Deptt. of Zoology,        |                     |
| University of Rajasthan,  |                     |
| Jaipur.                   |                     |
| 5. Dr. H. Swarup,         | Expert.             |
| Professor of Zoology,     |                     |
| Vikram University,        |                     |
| Ujjain.                   |                     |

Note :—Dr. G.P. Sharma, Professor and Head of the Department of Zoology, Punjab University, Chandigarh, the other Expert, could not attend the meeting.

Out of the 26 candidates called for interview, the following 19 appeared before the Selection Committee :—

1. Shri A.K. Pandey, Ujjain.
2. Shri P.K. Choudhary, Dewas.
3. Dr. C.B. Mathur, Jaipur.
4. Shri P.K. Dev, Jaipur.
5. Shri Ram Avtar Gupta, Alwar.

6. Shri Shyam Lal Mathur, Jaipur.
7. Shri Shiv Pal, Jaipur.
8. Shri Chandu Ram, Sri-ganganagar.
9. Shri Nirmal Kumar Lohia, Jaipur.
10. Shri Pradeep Bhatnagar, Jaipur.
11. Shri Prem Prakash Ojha, Jaipur.
12. Shri K.K. Kalra, Ujjain.
13. Shri Vashishth Narayn Singh, Varanasi.
14. Shri Om Prakash Sharma, Jaipur.
15. (Miss) Prabha Saxena, Jaipur.
16. (Miss) Indu Sharma, Jaipur.
17. Shri Prem Narayan Sharma, Udaipur.
18. Dr. Bipin Kumar Mehrotra, Jaipur and
19. Shri Gur Bachan Lal, New Delhi.

The Committee recommends that none of the candidates is suitable for permanent appointment.

Sd/—P.N. Srivastava.

Sd/—G. Narayanan.

Sd/—P.N. Mathur.

Sd/—H. Swarup.

Sd/—P.L. Bhatnagar,

*Vice-Chancellor.*

## APPENDIX-IV

*(Ref. Res. No. 11 of Syndicate dated 17th April, 1971)*

The Standing Consultative Committee (except Shri S.D. Mishra, President. RUTA) met on Sunday, the 7th March, 1971 at 10.30 A.M. in the University Office to consider the representation dated the 31st December, 1969 of Shri R.S. Pushkarna, Asstt. Registrar (Secy.) for re-fixation of his pay.

The following were present :—

- Dr. K.C. Khanna, Convener.
- 2. Principal, K.L. Varma, Jaipur.
- 3. Shri C.M. Mathur, L.A.
- 4. Shri S.L. Ajmera, Dy. Registrar (Estt.)

The Committee considered the representation of Shri R. S. Pushkarna, Asstt. Registrar ( Secy. ). It thoroughly examined all aspects of this representation. These are outlined below :—

1. Shri R.S. Pushkarna was appointed as Offg. Asstt. Registrar (Secy.) to hold charge of this post in a temporary capacity till the post was filled up through open selection, (vide this office letter No. 531364 D dated 12.12.67) Shri Pushkarna joined this post on 13.1.1968.

2. His pay as Offg. temporary Asstt. Registrar was fixed at Rs. 550/- p.m. with effect from that date in the scale of Rs. 400-30-640-40-800.

3. Actually the post of Asstt. Registrar (Secy.) was not advertised and Syndicate vide its Res. No. 17 dated the 17th October, 1968 resolved that Shri R.S. Pushkarna, Senior most Office Superintendent in the Central Office be appointed as Asstt. Registrar (Secy.) on probation for six months against the substantive vacant post of Asstt. Registrar (Secy.) w. e. f. 17.10.1968. After the expiry of this period Shri R.S. Pushkarna was confirmed in his appointment as Asstt. Registrar (Secy.) with effect from the 18th April, 1969 vide office order No. 20222-D dated the 29th April, 1969. His pay was fixed at Rs. 520/- w.e.f. 10.10.1968, the date of his appointment on probation.

4. Subsequently by an order of the Vice-Chancellor dated the 13th October, 1969, Shri Pushkarna was treated to have been taken on probation with effect from the 13th January, 1969 instead of from 17.10.68 as resolved by the Syndicate earlier. These orders of the Vice-Chancellor were not reported to the Syndicate with reference to its Resolution No. 17, dated 17-10.1968. This was apparently done to permit him the benefit of his annual increment in the Superintendent's grade before fixing his pay in the Asstt. Registrar's post.

5. Shri R.S. Pushkarna contends that he should be given his annual grade increment in the Asstt. Registrar's pay scale w.e.f. 13.1.1969 when he completed one year's service as Asstt. Registrar (Secy.) partly in an officiating temporary capacity and partly on probation.

6. In our opinion the view advanced by Shri Pushkarna does not hold good. His original temporary appointment did not will entitle him to permanent appointment. The post had to be advertised, but in this case it was decided, presumably in the interest of the work, to cut short this procedure and to appoint Shri Pushkarna on probation for six months. This view has not been clearly stated in these terms but keeping in view the administrative policy of the University in this regard both before and after this appointment, this is the only conclusion we are driven to draw. It may be added that recently the Syndicate while prescribing qualifications for the posts of, among others, Asstt. Registrar's vide its Res. No. 20, dated 7.11.1979 clearly laid down that these will be filled in by direct recruitment. Therefore, whatever vagueness may have crept into the appointment of Shri R. S. Pushkarna as Asstt. Registrar (Secy.), we are on safe ground in concluding that it should be considered as direct appointment to the post of Asstt. Registrar. On the strength of this view Shri Pushkarna's representation has no force.

However, it is necessary to regulate the pay of Shri Pushkarna as Asstt. Registrar w.e.f. 17.10.68, on which date he was placed on probation. In such cases the University has been consistently following a uniform policy and it would be in the fitness of things if the same is applied in the case of Shri Pushkarna also.

Shri Pushkarna's pay in his substantive post of Office Superintendent in the scale of Rs. 285-559 on the 1st January,

1968 was Rs. 500/- p m. This scale was revised to Rs. 275-20-375-25-650 with effect from Ist September, 1968. Shri Pushkarna 's substantive pay in this revised scale would have been Rs. 525/- on that date. As if he had not been working as temporary Offg. Asstt. Registrar (Secy.) The date of his next annual grade increment in his substantive post of Section Officer was Ist January each year, Therefore, in accordance with the policy of the University, Shri Pushkarna may be fixed at Rs. 550/- with effect from the 17th October, 1968 in the Asstt. Registrar's pay scale of Rs. 400-30-640-40-800. His date of next annual grade increment will be Ist January each year.

The Committee also interviewed Shri Pushkarna and explained to him why his representation could not be considered on the grounds advanced by him although the re-fixation of his salary recommended as above would meet his claims.

Sd/—K.C. Khanna.



## APPENDIX—V

(Ref :—Res. No. 10 of the minutes of the syndicate  
17th April 1972)

We have examined carefully the case of the fixation of salary of Dr. S.N. Pareekh and have succeeded in establishing the following facts:—

1. He was a confirmed hand in the Government service as C.A.S. in the grade of Rs. 285-25-560EB-30-800.
2. On 4.6.1964, he was transferred to a Rural Dispensary; and was given a rural allowance of Rs. 75/- in addition to his pay of Rs. 360/- which was drawing at that time. Thus his total emoluments were to be Rs. 435/-.
3. After working in his new assignment upto 30th June, 1964 i. e. for 27 days only, Dr. Pareek proceed on leave. He was sanctioned leave salary @ Rs. 395/- (Rs. 195.50 plus Rs. 35/-D.A.) from 1.7.64 to 28.10.64 and at Rs. 227.50 (Rs. 197.50 leave salary plus Rs. 30/- D.A.) with effect from 29th October, 1964 to 6th April, 1965.
4. After exhausting his leave as detailed above, he proceeded on extra-ordinary leave without pay sanctioned from 7.4.65 to 6.5.1967, but on 8th June, 1965 he joined the service of the University.
5. During this period of extra ordinary leave, he was permitted by Govt. to join the services of the University vide letter No. F13(1)80 MBH/58 dated 12.6.67. He was appointed on 8th June, 1965 on a temporary basis for six months, as indicated in the Registrar's letter No. 136-16D dated the 1st April, 1965. It was stated in this letter that his appointment would be on Rs. 450/-p.m. plus Rs. 10/- as personal pay. It was also mentioned that he would draw the salary of Rs. 460/-p.m. as at present drawn by you'.
6. This was done under the orders of the Vice-Chancellor on the verbal information supplied by Dr. Pareekh himself that his present salary in the Govt. at that time was Rs. 460/-
7. His period of temporary appointment for six months was extended by another temporary period of six months upto 7th December, 1965.

8. During this period of his temporary appointment the University advertised the post and Dr. Pareek, on the recommendation of the Selection Committee made on 18th April, 1966 and approved by the Syndicate on 4th May, 1966, was given a substantive appointment with effect from the 5th May, 1966, on probation for one year in the grade of Rs. 257-25-500EB-25-750 vide letter No. 22305D dated the 7th June, 1966.

9. So far as his pay was concerned, it was to be fixed on the basis of his emoluments in the Govt. but till then he was to continue drawing @ Rs. 450/- p.m. Rs. 10/-.

10. He was also to be paid a Conveyance Allowance of Rs. 60/- p.m. on an ad-hoc basis for attending the calls of the University hostels and also permitted to charge Rs. 4/- per visit during day hrs., and Rs. 8/- per visit during night hours from 9 p.m. to 8 a.m. He was also allowed private practice provided it did not interfere with the normal duties in the University.

11. Dr. Pareek has been drawing Rs. 450/- plus Rs.10/- regularly every month since then in addition to his allowances (D.A. plus C.A.) His pay as required in the final order has never been fixed.

*Our tentative view of this case :—*

- (i) it is certain that Dr Pareek did not wish to continue in his rural assignment and was anxious to come to a City. During his long period of leave he seems to have brought this case for appointment to the notice of the Vice Chancellor who offered him a temporary appointment in the first instance. His temporary appointment was in due course converted into a substantive appointment as stated above and he was confirmed with effect from 5th May, 1967 at the expiry of the probationary period.
- (ii) The Vice-Chancellor's remarks on the temporary appointment given to him in the first instance indicate that he understood from Dr. Pareek that the latter's salary at that time was Rs. 460/-, whereas the fact is that his total emoluments on 30.6.64 were Rs. 435/- (Rs. 360/- plus Rs. 75/- rural

was not entitled to an increment during the period of his leave. We have, however, not given him any benefit of this kind which he claimed as we have taken his last salary drawn under the Govt. before preceeding on leave into account.

Dr. Pareekh did not supply correct information, but we are prepared to take a lenient view of this matter as the University could have gone throughly into this matter at the time of his appointment, which unfortunately was not done. If Dr. Pareekh had continued in the service of Govt. he would have drawn on 1.3.66 the following pay:—

## ANNEXURE 'A'

1.3.66	385	8-6-65	Rs. 410 plus 50	Rs. 460	
1.4.66	385 plus 60 445	8-6-66	Rs. 435 plus 65	Rs. 500 plus 60	560
1.3.67	410 plus 130 540	8-6-67	Rs. 460 plus 140	Rs. 600 plus 60	660
1.3.68	435 plus 150 585	8-6-68	Rs. 485 plus 135	Rs. 638 plus 60	698
1.9.68	450	1-9-68	Rs. 500 plus 120	Rs. 620 plus 60	680
1.3.69	460 plus 120 580	8-6-69	Rs. 525 plus 120	Rs. 645 plus 60	705
1.3.70	485 plus 120 605	8-6-70	Rs. 550 plus 120	Rs. 670 plus 60	730
1.3.71	510 plus 120 630				

From the above, it is clear that Dr. Pareek's fixation of pay on coming to the University has actually been to his advantage.

It is for consideration whether his conveyance allowance which was granted on an ad-hoc basis should now be allowed to him or not.

## APPENDIX—VII

Minutes of the meeting of the Committee appointed by the Syndicate vide its Res. No. 32 (ix) dated 14th August held on 9th March, 1971 at 3.30 p.m. in the University Office.

### Present

1. Prof. G.C. Pande      Convener.
2. Dr. K.C. Khanna.
3. Dr. P.N. Mathur.

*Note* :—Shri K. C. Bakiwala could not attend the meeting.

The Senate made the following observations vide its Res. No. 3 (12) dated the 21st March, 1970 :—

‘जिज्ञासुओं के प्रतिनिधियों का विश्वविद्यालय की निर्णायक वाहीज की बैठकों में दर्जियों के रूप में उपस्थित होने देने के प्रश्न पर विचार किया जावे ।’

2. The Syndicate appointed this Committee to examine the above question thoroughly and report.

3. The Committee noted that under the provisions of S. 94 of the University Hand Book Part II, any teacher could be present at a meeting of the Senate as a visitor with the permission of the Vice-Chancellor. There was no such provision in respect of other statutory bodies of the University.

4. After examining the matter thoroughly the Committee regretted that in its opinion the suggestion of permitting the representatives of teachers as visitors in the meetings of the University bodies could not be accepted for Statutory bodies other than the Senate under the existing statutes. The suggestion could, however, be considered for non-Statutory bodies.

Sd/— G.C. Pande  
Convener.

## APPENDIX—VIII

Minutes of the meeting of the Board of Inspection held on 7th April, 1971 at 11.00 A.M. in the University Office, Jaipur.

## Present

- Prof. P.L. Bhatnagar, Vice-Chancellor,  
(In the Chair)
2. Dr. B.N. Consul,  
Dean, Faculty of Medicine & Pharm.
  3. Prof. G.C. Pande,  
Dean, Faculty of Arts.
  4. Dr. M.C. Singhal,  
Dean, Faculty of Education.
  5. Principal Mohanlal Bhargava,  
Dean, Faculty of Ayurveda.
  6. Prof. P.L. Bhargava,  
Dean, Faculty of Sanskrit Studies.
  7. Shri Moti Lal Joshi, Inspector of Sanskrit Education, Rajasthan (representing the Director of Sanskrit Education who was specially invited in connection with the cases of Sanskrit Colleges).

Shri J.N. Mathur, Dy. Registrar.

1. The minutes of the meeting of the Board of Inspection held on 20th April, 1970 were *confirmed*.
2. The Board *approved* the panel of Inspectors for the session 1971-72.
3. With reference to its Resolution No. 5 dated the 20th April, 1970 selecting five colleges for periodical inspection during the year 1970-71, it was *reported* to the Board that:

5. The Board considered the following applications for fresh affiliation w.e.f. July, 1971 in the standards mentioned against each.

S.No.	Name of the proposed College.	Standard/subjects for which applied for affiliation.
1.	Janta Degree College, Deeg.	<p>(i) <i>T.D.C. (Arts)</i> In all compulsory and optional subjects—English Lit. Sanskrit, Hindi, Maths. Phil. Econ. Hist. Pol. Sc., Geog., Music, Drawing &amp; Painting Home Sc., Sociology and Psychology.</p> <p>(ii) <i>P.U.C. (Arts)</i> In all compulsory subjects and optional subjects—English, Sanskrit, Hindi, Maths., Logic, Econ., History, Pol. Sc., Geog., Music, Drawing. Home Sc., Elementary Sociology &amp; Psychology.</p> <p>(iii) <i>T.D.C. (Commerce)</i> In all compulsory subjects and optional subjects—Adv. Banking, Maths., Insurance, Adv. Bus. Statis., Trade and Transport, Stenotyping, Pub. Econ., Labour, Problem and Personnel Management.</p> <p>(iv) <i>P.U.C. (Commerce)</i> In all compulsory and all optional subjects.</p>
2.	Birla Ayurveda College, Pilani.	Pre-Ayurveda.



*Resolved to recommend that :*

- (i) The application of the proposed Janta Degree College, Deeg be entertained and the Vice-Chancellor be *authorised* to appoint Inspectors for the same provided that—(a) the Management agreed to drop the P.U. course as it was in the stage of being winded-up and (b) the college was prepared to start the T.D.C. course either in the Faculty of Commerce or in the Faculty of Arts indicating not more than five optional subjects in the Faculty of Arts.
- (ii) The application of the proposed Birla Ayurveda College, Pilani be *rejected* as complete information was not given in the application and the Management failed to supply the required information despite the fact that the Registrar vide his letters dated 29th Dec., 1970 and 5th Feb., 1971 had asked the Management to furnish the same by 15th February, 1971.

6. The Board considered the applications of the following newly proposed Teachers Training Colleges (for B.Ed. Standard) for fresh affiliation w.e.f. July, 1971 :—

- (1) Udai Bhanu Teachers Training College, Dholpur.
- (2) Gyatri Shiksha Mahavidyalaya, Jaipur or Sanganer.
- (3) Indian Institute of Education, Bharatpur.
- (4) Mahadevi Piramal Institute of Education, Bagar (Jhunjhunu).
- (5) Bapu Vidyapith Teachers Training College, Karauli.

In this connection the Board noted that :—

- (i) The application of the college at serial No. (1) above was incomplete and the Registrar vide his letter dt. 6.3.1971 had requested the Management for supplying full information

including the Certificate of registration of the institution which was not received so far.

- (ii) The applications of the remaining four colleges mentioned above had been received after the expiry of the last date viz. 31st December, 1970 and as required under S. 37 (1) of the Univ. Hand Book Pt. II no special valid reasons were given for the late submission of the applications; the same had not been received through the Director of P & S Education, Rajasthan, Bikaner nor did the applications mention that the Managements would not apply to the State Govt. for grant in aid and the Financial position of the Managements as evinced from the information contained in the applications was un-satisfactory.
- (iii) Besides in the case of colleges at sl. nos. (2) (4) and (5) a perusal of the constitution of the Managements revealed that the opening of Teachers Training Colleges was not covered under their objects.

Resolved to recommend that the applications of all the five colleges mentioned above be *rejected*.

7. The Board considered applications for fresh affiliation in additional optional subjects/standards, made by the following colleges —

S.No.	Name of the College	Standard/Subjects for which applied for affiliation.
1.	P.R. Ayurveda College, Sikar.	IInd Ayurvedacharya.
2.	Shri Narayan Ayurveda College, Jodhpur.	Ist Ayurvedacharya.
3.	R.V. Vijai Singh Pathik Shramjeevi Evening College, Ajmer.	T.D.C. (Com.) In all compulsory subjects & optional subjects :—Adv. Banking, Adv. Statistics,

Steno typing, Trade and Transport.

- |    |  |   |
|----|--|---|
| 4. | Nehru Memorial College, Hanumangarh.       | M.A. History & Pol. Sc.   |
| 5. | Dayanand College, Ajmer.                   | M.A. Economics.   |
| 6. | Meharishi Dayanand College, Sriganganagar. | <p><i>T.D.C. (Com.)</i><br/>           In all compulsory subjects &amp; optional subjects :—Adv. Bus. Statis., Steno-typing, Labour Problems &amp; Personnel Management and Advanced Banking.</p> |
| 7. | S.P.U. College, Falna                      | <p><i>T.D.C. (Sc.)</i><br/>           In all compulsory and optional subjects :—Physics, Chemistry, Maths., Biology, Botany, and Zoology.</p>   |
- 

*Resolved to recommend that :*

- (i) The application of Shri Narayan Ayurveda College, Jodhpur for 1st Ayurvedacharaya standard be *rejected* in view of the fact that the college had not yet secured permanent affiliation for Pre-Ayurveda Satandard.
- (ii) The Application of Nehru Memorial College, Hanumangarh for affiliation for M.A. in History and Pol. Science be *rejected* in view of the fact that the college had not yet secured permanent affiliation for the degree standard.
- (iii) A local enquiry be made in the case of the remaining five colleges at serial Nos. 1,3,5,6 & 7 and the Vice-Chancellor be *authorised* to appoint Inspectors for the same.

8. The Board considered an application dated 29-12-70 from the Vyavasthapak, Shri Bajrang Vidyalaya Committee, Deeg, for fresh affiliation of the proposed 'Shri Bajrang

Evening Degree College' to be started at Deeg w.e.f. July, 1971 in the Faculty of Arts (Pre-University and T.D.C. with subjects of Hindi Lit., Economics, Sanskrit, Civics, Political Science, History, Geography, Mathematics and Psychology, to be run in the premises of the existing Shri Bajrang Teachers Training College, Deeg.

*Resolved to recommend* that the aforesaid application be *rejected* as the Day College which the Management was already running was a professional college of B.Ed. standard.

9. The Board considered an application dated 30-12-70 from the President, Shri Adinath Jain Shikshan Sansthan, Alwar for fresh affiliation of the proposed "Jain Degree College (Evening)" to be started at Alwar w.e.f. July, 1971 in the Faculty of Arts in all compulsory and optional subjects to be run in the premises of the existing Shri Jain Teachers Training College, Alwar.

*Resolved to recommend* that the aforesaid application be *rejected* as the Day College which the Management was already running was a professional college of B.Ed. standard.

10. The Board considered an application dated 15.12.70 from the Chairman, Bharat Sewak Shiksha Samiti, Jaipur for fresh affiliation of the Lal Bahadur Shastri College, Jaipur for LL.B. classes (morning or evening as convenient to the majority of the students) w.e.f. July, 1971.

In this connection it was reported to the Board that :—

- (i) The aforesaid Samiti was also running (a) Lal Bahadur Shastri Evening College in the Faculty of Arts for B.A. Standard in the premises of University Rajasthan College Campus w.e.f. July, 1963 and (b) Shri Lal Bahadur Shastri College in the Faculty of Science (Day College) for B.Sc. standard w.e.f. July, 1970 in its own building in Tilak Nagar Colony in Jaipur, and had not yet fulfilled the conditions of affiliation for these standards.
- (ii) The Management proposed to utilise the building and furniture of the Science College which was run in day, for the proposed Law classes and it was prepared to appoint teaching

staff for the proposed Law classes as required by the University and provide necessary funds for Library and Endowment Fund.

- (iii) The Management was asked vide Registrar's letter dated 28.1.1971 to send budget estimates of the additional expenditure involved and sources of income for meeting expenditure towards staff, endowment and library grant. In reply the Chairman gave an undertaking that they would run the proposed classes without grant-in-aid from the Govt. so long as it was not available under rules.
- (iv) A letter had already been addressed to the Chairman, Bharat Sewak Shiksha Samiti in January, 1971 that it would no longer be possible for the University to allow the Lal Bahadur Shastri Evening College to function in the University buildings and that the Samiti must, therefore, make alternative arrangements w.e.f. the next session 1971-72 (vide Syndicate Res. No. 36 (iii) dated 12.1971).

*Resolved to recommend* that an Inspection Committee in connection with the aforesaid application for LL B. classes be appointed by the Vice-Chancellor *provided* suitable arrangements for the location of evening classes in the Faculty of Arts were first made by the Management.

11. The Board considered the applications of the following colleges duly recommended by the Director of Education, Rajasthan/State Government for permanent affiliation in the subjects and standard noted against each w.e.f. July, 1971 :—

1. Sophia Girls College, B.A. (Hons.) English Litt. Ajmer.
2. M.L.V. Govt. College, M.A. Economics. Bhilwara.
3. Government College- T.D.C. (Arts & Science). Sri-Ganganagar.
4. Dungar College, Bikaner.
  - (i) M.Sc. Physics
  - (ii) M.Sc. Chemistry

- (iii) T.D.C. (Arts) addl. optional subject- Sociology.
- (iv) M.A. Pol. Science.
5. R.N.T. Medical College, Udaipur. M.S. (Gynac. & Obst.)
6. S.P. Medical College, Bikaner. M.D. Pathology.
7. S S.G. Parcek College, Jaipur. (i) T.D.C. (Arts and Commerce)  
(ii) T.D.C. Commerce Evening.
8. Government College, Nagaur. T.D.C. (Arts and Commerce)
9. Government College, Bhinmal. T.D.C. (Arts).
10. Raj Rishi College, Alwar. M.A. Political Science and Hindi.
11. M.S.J. College, Bharatpur. M.Sc. Chemistry.
12. Government College, Chittorgarh. T.D.C. (Arts).
13. S.M.S. Medical College, Jaipur. M.S. (E.N.T.)

*Resolved that the Vice-Chancellor be authorised to appoint Inspectors in each case to make a local enquiry and report, and take further necessary action on the reports to be submitted by the Inspectors.*

12. It was reported to the Board that the Vice-Chancellor vide his orders dated 23.12.1970 entertained the application of Gramothan Vidyapeeth Shiksha Mahavidyalaya Sangaria for permanent affiliation for B.Ed. standard w.e.f. July, 1971 and appointed an inspection committee consisting of (i) Dr. M.C. Singhal, Principal, Basic Teachers Training College, Sardarshahr (Convener) and (ii) Shri V.V. Vajpayee,

Principal, Government Teachers Training College, Bikaner (Co-Inspector) for making a local enquiry and report and (b) the Inspection Report was awaited.

In this connection Dr M.C. Singhal informed in the meeting that it had not been possible for him so far to fix up-a date for the inspection because no date suggested by him so far suited the Co-Inspector Shri Vajpai.

*Resolved that* (i) the orders of the Vice-Chancellor referred to above be confirmed and (ii) Shri M.R. Paliwal, Principal, Gandhi Teachers Training College, Gulabpura be appointed as Co-Inspector in place of Shri V.V. Vajpayee.

13. The Board considered letter No. F. 21 (22) MPH/67/Gr. I dated the 3rd November, 1970 from the Secretary to the Government of Rajasthan, Medical and Public Health Department, Jaipur forwarding there-under the application of J.L.N. Medical College, Ajmer and requesting that the said college be granted permanent affiliation for M.B.,B.S. standard w.e.f. July, 1971 as most of the deficiencies pointed out by the Inspectors had been made good and that the completion of the construction of the building for the college depended upon the allotment and actual release of funds in the Fourth Plan Period.

*Resolved to recommend* that provisional affiliation of the aforesaid college for M.B.,B.S. standard be extended by one year and in the meanwhile the Principal and the State Government be requested to actually fulfil all the requirements.

14. The Board considered the applications of the colleges duly forwarded by the Director of Education/Ayurveda/Medical Secretary, Rajasthan which had yet to fulfil certain conditions, for extension of affiliation w.e.f. July, 1971 for the various standards (*names of the colleges together with standards given vide Appendix-II.*

*Resolved to recommend* that provisional affiliation in each case be extended by further one year and the Heads of the Institutions be requested to fulfil all the requirements.

15. With reference to Syndicate Resolution No. 46 dated 14-8-1970 confirming the orders dated 4-8-1970 of the 'Vice-Chancellor Committee' granting provisional affiliation to Maharao Shekhaji Shiksha Mahavidyalaya Jaipur for B.Ed.

standard w.e.f. July, 1970 for one year for a unit of 60 students on the conditions that—(i) the college would fulfil the minimum requirements, (ii) a report of compliance would be sent by the college by 30th October, 1970 and (iii) the college would be re-inspected by the University Inspectors, *it was reported to the Board that*—(a) on receipt of the compliance report the Vice-Chancellor appointed an inspection committee consisting of Dr. M.C. Singhal, Dean, Faculty of Education (Convener) and Shri V.V. Vajpayee, Principal, Government Teachers Training College, Bikaner (Co-Inspector) for making a local enquiry, (b) the committee inspected the college on 3-12-1970 and submitted its report recommending extension of affiliation for a further period of one year w.e.f. July, 1971 on fulfilment of the conditions mentioned in the report by July, 1971, and (c) conditions mentioned in the inspection report were communicated to the college for taking necessary steps for their fulfilment by 31-3-1971, and (d) the Principal of the College vide his letter No. 70 dated 26-2-1971 informed that the conditions as mentioned in the report would be fulfilled by July, 1971 as desired by the Inspection Committee.

In this connection the Board considered the request of the Principal for granting extension of affiliation w.e.f. July, 1971.

*Resolved to recommend* that the provisional affiliation of Maharao Shekhaji Shiksha Mahavidyaya, Jaipur for B.Ed. standard be further extended by one year and in the meanwhile the Management be asked to fulfil all the requirements.

16. It was reported to the Board that :—

(i) On an application made by the principal, S. M. S. Medical College, Jaipur for fresh affiliation for Diploma in D.V.D. w.e.f. July, 1970, the Vice-Chancellor appointed a single-member Inspection Committee consisting of Dr. K.C. Kandhari, Professor, Department of Dermatology, A.I.I.M.S., New Delhi to make a local enquiry and report.

(ii) Accordingly, the college was inspected by Dr. Kandhari on 27-7-1970 and the Inspector recommended that provisional affiliation be granted to the college.



- (iii) A reference was made to the Medical Council of India for giving clearance to start the said course which was still awaited and, therefore, the Vice-Chancellor passed orders that the question of granting provisional affiliation to the college for D.V.D. course be considered after necessary clearance from the Council was received. The Principal of the College and the Medical Secretary, Rajasthan were informed accordingly.

*Resolved that the aforesaid report be recorded.*

17. The Board *confirmed* the orders dated 7th September, 1970 of the 'Vice-Chancellor Committee' accepting the recommendation made by the single-member Inspection Committee (consisting of Dr. Sarnam Singh, Head of the University Department of Hindi) to the effect that instead of providing a grant of Rs. 50,000/- for apparatus for Post-M.A. Diploma Course in Linguistics as earlier proposed by him the B.V. College of Arts and Science, Banasthali be asked to provide and spend a sum of Rs. 25,000/- only which was deemed enough for the purpose.

18. It was reported to the Board that on the recommendation made by a two-member Inspection Committee consisting of Dr. S.N. Singh, Principal, R.B.S. College, Agra and Dr. N. Prasad, Dean, Rajasthan College of Agriculture, Udaipur appointed by the Vice-Chancellor for inspection of the G.V. College of Agriculture, Arts and Science, Sangaria, the Vice-Chancellor vide his orders dated 23-1-1971 allowed the college to develop Horticulture Garden in 10 acres of land only, in relaxation of the limit of 50 acres of land as laid down for the purpose in the minimum requirements of affiliation.

*Resolved that the Vice-Chancellor's orders referred to above be confirmed.*

19. With reference to the Board of Inspection Resolution No. 14 dated 20-4-1970 extending the provisional affiliation of Jialal Institute of Education, Ajmer for M.Ed. standard for one year more beyond the M.Ed. examination of 1970, and authorising the Vice-Chancellor to appoint an Inspection Committee (consisting of at least one external member) for making a local enquiry in connection with the application of the college for permanent affiliation, *it was reported to the Board that the Inspection Committee could*

not be appointed so far because the Secretary of the College vide his letter No. F. 3/200 dated 23-12-1970 informed the University that inspite of his best efforts the teaching posts of two additional Lecturers had not yet been filled up and efforts were being made to fill up the same by July, 1971.

*Resolved to recommend* that the provisional affiliation of the Jialal Institute of Education, Ajmer for M.Ed standard be further extended by one years beyond the M.Ed. Examination of 1971 and the Management be asked to furnish the requisite compliance report about the teaching staff latest by 31st July 1971.

20. The Board *confirmed* the action taken by the Vice-Chancellor in entertaining the applications and the inspection reports of the Institutions and granting provisional/permanent/extension of affiliation w.e.f. July, 1970 in the Faculties and standasds noted against each on the recommendation of the inspectors appointed in each case for the purpose.

S.No.	Name of the College	Standard/Subject	Action taken by the Vice-Chancellor.
1.	Govt. College, Rajgarh.	T.D.C. (Arts)	Granted permanent affiliation.
2.	Govt. College, Pali.	T.D.C. (Arts & Commerce)	—do—
3.	Govt. College, Bundi.	P.U.C. and T.D.C. (Arts and Commerce) except additional optional subject Geography.	—do—
4.	Raj Rishi College, Alwar.	(i) B.A. (Hons.) Hindi (ii) B.Sc. (Hons.) Chemistry.	—do—
5.	Ch. B.R. Godra Govt. Girls College, Sriganganagar.	Additional optional subject, Philosophy for T.D.C. and P.U.C. (Arts)	—do—
6.	Govt. College, Shahpura.	T.D.C. (Arts & Science).	—do—
7.	Lohia College, Churu.	T.D.C. (Science) Additional optional Subject Biology, Botany and Zoology. (ii) B.A. (Hons.) in Hindi.	—do—  Granted Permanent affiliation.

(iii) B.Com. (Hons.) in Accountancy and Business Statistics.		
(i) M.Sc. Chemistry.	B.V. College of Arts and Science, Banasthali.	Granted provisional affiliation
(ii) M.A. Sociology.		Granted permanent affiliation.
T.D.C. (Com.)	Smt. Gomti Devi College, Badagaon.	Granted permission to start 1st Yr. Class.
T.D.C. (Arts & Com.)	Government College, Nasirabad.	—do—
T.D.C. (Arts & Com.)	Government College, Jaisalmer.	Granted provisional affiliation for one year.
T.D.C. (Arts & Com.)	Govt. College, Sambhar.	—do—
M.Sc. (Physics)	Govt. College, Kota.	—do—
M.A. (Pol. Science)	R.R. College, Alwar.	—do—
T.D.C. (Science)	Govt. College, Nagaur.	—do—

1	2	3	4
16.	Dungar College, Bikaner.	M.Sc. Botany and Zoology	—do—
17.	M.S. College for Women Bikaner.	T.D.C. (Arts) additional Optional subject Home Science,	—do—
18.	Govt. College, Karauli	T.D.C. (Commerce)	—do—
19.	Govt. College, Kota.	M.Com. in all groups	—do—
20.	Nehru Sharda Peeth, Bikaner.	T.D.C. (Arts & Com.)	Granted extension w.e.f. July, 1970.
21.	Govt. College Jhalawar.	T.D.C. (Com.)	Provisional affiliation granted for one year.
22.	Seth Budhmal Dungar College, Sardarshahr.	P.U. (Science)	—do—
23.	Govt. College, Shahpura.	T.D.C. (Com.)	—do—
24.	Govt. College, Tonk.	T.D.C. (Arts)	Granted provisional permission to start classes.

	S.M.B. Govt. College, Nathdwara.	T.D.C. (Arts) Geography	Provisional affiliation granted for one year.
25.			
26.	Shri Narain Ayurveda College, Jodhpur.	Pre-Ayurveda	—do—
27.	P.R. Ayurveda College, Sikar.	1st Ayurvedacharya	—do—
28.	Kanoria Mahilla Mahavidyalaya, Jaipur.	T.D.C. (Arts) Pub. Admn.	—do—
29.	S.B.S. Govt. College, Kaladera.	T.D.C. (Science)	Permanent affiliation granted.

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21. With reference to the Board of Inspection Resolution No. 13 dated 20-4-1970 recommending extension of provisional affiliation for one year to the Regional College of Education, Ajmer for B.Ed. Summer School-cum-Correspondence Course and authorising the Vice-Chancellor to examine the whole position of this course for granting permanent affiliation, it was reported to the Board that—(i) The Vice-Chancellor after discussing the whole matter with the Dean, Faculty of Education and the Principal, Regional College of Education granted extension in provisional affiliation for the B.Ed. Summer School-cum-correspondence course w.e.f. July, 1970 for a further period of two years i.e. upto and inclusive of the B.Ed. Examination of 1972 vide his orders dated 13-11-1970 and (ii) the situation would be reviewed by the Vice-Chancellor in consultation with the Dean, Faculty of Education and the Principal, Regional College of Education, Ajmer some time in January, 1972.

*Resolved that the action taken by the Vice-Chancellor be confirmed.*

22. The Board considered the following recommendation of the Committee appointed by the Vice-Chancellor under the convenership of Dr. Satish Chandra to examine the recommendations of the Committee appointed by the U.G.C. to visit the non-professional colleges affiliated to the University :

“Affiliation to Science Courses should not be granted until a college has basic facilities like laboratories and properly qualified staff.”

*Resolved to recommend that the aforesaid recommendation of the Committee be noted with the remarks that minimum conditions in respect of Laboratory, equipment, library, teaching staff and other physical facilities must be insisted upon before granting affiliation for a course in any Faculty.*

23. The Board considered the applications of the following evening colleges, duly forwarded by the Director of Education, Rajasthan, Jaipur for extension of affiliation w.e.f. July, 1971 for the various standards as noted against each, as the conditions of affiliation had not been completely fulfilled.

S.No.	Name of the College	Standard for which extension solicited.
1.	Mahatma Gandhi Sandhya Mahavidyalaya, Sri Ganganagar.	P.U.C. & T.D.C. (Arts)
2.	Hitkari Co-operative Evening Collage, Kota.	T-D.C. (Arts)
3.	Nehru Sharda Peeth Evening College, Bikaner.	P.U.C. & T.D.C. (Arts & Commerce)
4.	Rajasthan Vidyapeeth Vijay Singh Pathik Sharamjeevi Evening College, Ajmer.	T.D.C. (Arts)
5.	Lal Bahadur Shastri Evening College, Jaipur.	T.D.C. (Arts)

*Resolved to recommend* that provisional affiliation of the Colleges at serial Nos. 1,2,3 and 4 above be extended by further one year w.e.f. July, 1971 and the Managements be asked to fulfil all the requirements.

*Resolved further to recommend* that in the case of the college at serial No. 5 viz., Lal Bahadur Shastri Evening College, Jaipur the provisional affiliation be extended for one year w.e.f. July, 1971 provided the Management of the College, arranged a suitable building for running the classes in view of the fact that the Syndicate vide its Res. No.36 (iii) dated 1-2-1971 had already asked the Management to shift the classes from the University buildings (Rajasthan College Campus).

24. With reference to its Resolution No.4 dated 25th April, 1969 selecting R.R. Collage, Alwar for its periodical inspection for the year 1969-70, the Board considered the periodical inspection report of the college received from the convening inspector on 27th March, 1971 (vide Appendix-III).



In this connection the Board noted that the Inspection Report was not made out on the prescribed form and that the M.Sc. Chemistry classes had been started in the College after the inspection committee had been appointed.

*Resolved to recommend* that in view of the above, a fresh Inspection Committee consisting of the following members be appointed to conduct the periodical inspection of the said college.

1. Prof. R.C. Mehrotra (Convener)
2. Prof. Raj Krishna
3. Prof. R.G. Sarien

25. It was reported to the Board that the Vice-Chancellor passed orders that periodical inspection of Lal Bahadur Shastri Evening College, Jaipur be conducted during the year 1970-71 and appointed an Inspection Committee consisting of Prof. G.C. Pande, Head of the University Department of History & Indian Culture, Jaipur (Convener) and Prof. G.C. Patni, Head of the University Department of Mathematics, Jaipur Co-Inspector and as informed by Dr. Pande in the meeting, the inspection had yet to be conducted.

*Resolved that* the orders of the Vice-Chancellor be confirmed the Inspection Committee be requested to expedite the inspection.

26. The Board considered appointing a Committee to deal with the applications of colleges for affiliation for a term of three years viz., 1972-73, 1973-74 and 1974-75 as provided for under Section 24-J (2) of the University Act.

*Resolved to recommend* that the following committee be appointed for a term of three years, under Section 24-J(2) of the University Act.

- (1) Dean, Faculty of Arts (Convener).
- (2) Dean, Faculty of Science.
- (3) Dean, Faculty of Commerce.
- (4) Dean, Faculty of Education.
- (5) Dean, Faculty of Medicine & Pharm.

Arising out of the above the Board further *resolved to recommend* that a Committee consisting of the following members be appointed to suggest for consideration of the Board rules for the approval, recognition and affiliation of institutions and colleges vide Section 24-J (3) of the University Act:

- (1) Dean, Faculty of Arts (Convener)
- (2) Prof. Raj Krishna, Head of the University Department of Economics, Jaipur.
- (3) Dean, Faculty of Science.
- (4) Prof. R.C. Mehrotra, Head of the University Department of Chemistry, Jaipur.
- (5) Dean, Faculty of Commerce.
- (6) Principal, Mali Ram, Seth G.B. Podar College, Nawalgarh.
- (7) Dean, Faculty of Law.
- (8) Dean, Faculty of Education.
- (9) Principal K.C. Tandon, Gramothan Vidyapeeth Shiksha Mahavidyalaya, Sangaria.
- (10) Dean, Faculty of Medicine & Pharm.
- (11) Dr. Shur Veer Singh, Principal, R.N.T. Medical College, Udaipur.
- (12) Dean, Faculty of Ayurveda.
- (13) Dean, Faculty of Sanskrit Studies.
- (14) Shri Motilal Joshi, Inspector of Sanskrit Education Rajasthan.

27. It was reported to the Board that :—

- (i) Shri Bhanwar Lal Dugar Ayurveda Vishwa Bharti, Sardarshahr was granted provisional

affiliation for Pre-Ayurveda and Ayurveda-acharya standards w.e.f. the session 1956-67 and 1967-68 respectively and was extended w.e.f. July, 1970 in preparation for the Pre-Ayurveda Examination of 1971, Ist Ayurvedacharya Examination of December, 1971, IInd Ayurvedacharya Examination of June, 1973 and Final Ayurvedacharya Examination of December, 1974.

- (ii) The College had not fulfilled even the essential conditions of affiliation viz. teaching staff, library, laboratory equipment etc.
- (iii) The Principal of the College vide his letter No. 4717/71 dated 15-3-1971 sent application for granting extension of affiliation w.e.f. July, 1971.

It in this connection the Board considered letter dated the 26th March, 1971 from the Registrar, Gandhi Vidya Mandir, Sardarshahr (the management of the College) informing the University that due to financial stringencies and insufficient adhoc grant from the Government, the Vidya Mandir did not find itself in a position to fulfil the minimum requirements laid down by the University and expressing inability of the Management to run the college any longer.

*Resolved to recommend* that in view of the inability expressed by the management to run the college on account of financial stringencies—(i) the Management be asked to take steps for closing the institution in accordance with the provisions of S.26 (8) of the University Hand Book Pt. II and (ii) however in the management was able to fulfil the obligation towards the employees of the institution and also ensured that all the students of the institution were accommodated in the existing colleges, it should send a further request for consideration of the University.

28. It was reported to the Board that the following deficiencies had been observed in most of the institutions which scrutinising the Annual Returns of the Colleges.

- (1) Lecturers/Post-graduate Head in the colleges (Government as well as Private) were still taking 24 and 18 periods per week respectively.

ely instead of 21 and 15 periods (as prescribed under 0.71 of the University Hand book Pt. II). Similarly in the case of Science subjects they were still equating 3 practical periods with two theory periods.

- (2) The duration of a period in some colleges was 40 minutes instead of the prescribed minimum duration of 45 minutes.
- (3) Recurring and Non-recurring grants as per minimum requirements of the University were not being provided and spent for library, equipment etc.
- (4) Degree Heads had not been assigned in each of the Departments.
- (5) Three Post-graduate/Degree Heads had not been appointed in the Deptt. of Commerce, and
- (6) The number of students in a class or section of a class exceeded 60.

*Resolved that* (i) the aforesaid report be recorded and (ii) the defaulting institutions be addressed to make good the deficiencies.

29. The following was reported to the Board in respect of the S.S.G. Pareek Teachers Training College, Jaipur provisionally affiliated to the University for B.Ed. standard for the B.Ed. examination of 1971 (the college was first started w.e.f. July, 1965 :—

- (1) During the past 5-6 years the college had not been able to fulfil even the essential conditions of affiliation and except for one or two occasions it had not sent even the Annual Returns and compliance reports to the University. Last year the application for the session 1970-71 was received as late as in July, 1970 and the Syndicate at its meeting held on 4th July, 1970 authorised the Vice-Chancellor to take such necessary action in the matter as he deemed fit.

- (2) The Vice-Chancellor called the Administrator of the College Shri Gopal Lal Purohit who gave a solemn undertaking in writing on 20th July, 1970 to the Vice-Chancellor that all the conditions of affiliation would be fulfilled and all the deficiencies made good latest by the 31st October, 1970, and requested for extending the provisional affiliation upto the B.Ed. examination of 1971. Shri Purohit further mentioned in his undertaking that in case of default the Management would not ask for further extension of offiliation and the University would have every right to withdraw the provisional affiliation and the Management would accept the decision of the University without any protest.
- (3) 31st October, 1970 passed away and no compliance report was received from the college till the first week of January, 1971. The Vice-Chancellor there-upon appointed an Inspection Committee consisting of Dr. M.C. Singhal (Dean, Faculty of Education) Principal, Basic Teachers Training College Sardarshahr and Dr. I.B. Varma, Principa., Banasthali Vidyapeeth College of Education, Banasthali to make a local enquiry and report as to whether the conditions of affiliation had actually been fulfilled by the college and about the suitability of the college to continue beyond the B.Ed. examination of 1971. The college authorities were informed about the proposed inspection.
- (4) The Inspectors conducted the inspection of the college on 25th March, 1971 and submitted their report to the University.

In this connection the Board considered—(i) the Inspection Report together with the summary of the report as prepared by the Convening Inspector (*vide Appendix-IV*) and (ii) the request of the college for permanent affiliation beyond the B.Ed. examination of 1971.

From a perusal of the above documents the Board noted that :—

- (a) No Principal had been appointed so far and a Lecturer who had been officiating as Principal for the last so many years was not getting even Offg. allowance.
- (b) No Professors had been appointed.
- (c) Against the rules of the University 120 pupils were huddled together in one unit only instead of having two units of 60 each. It was only in the month of March, 1971 that two units were created.
- (d) There were only 6 whole-time and three part-time Lecturers as against a minimum of 11 whole-timers (including the Principal).
- (e) There was no building of the college of its own and the whole show was run in two rooms of the Pareek College of Arts and Commerce. A building which was under construction for the last 3-4 years and which was proposed to be for the Teachers Training College had not yet been completed and there were no prospects of its early completion for want of funds.
- (f) There was no separate hostel for the Teachers Training College and the pupil teachers resided in the city except for a few who were accommodated in the hostel of the Pareek Arts and Commerce College.
- (g) There was no Science Laboratory or Psychological Laboratory.
- (h) There was a small library but no reading room and not a single daily or weekly paper was found in the library.
- (i) The Inspectors were not satisfied about the position of the endowment fund in the name of the Training College.
- (j) There was no atmosphere like a Teachers Training College, and

- (k) The Inspectors stated that Shri Gopal Lal Purohit, Administrator of the College told them that the Management was not in a position to provide finances for running the Teachers Training College in accordance with the conditions of affiliation given by the University.

*Resolved to recommend* that (i) the S.S.G. Pareek Teachers Training College, Jaipur be *disaffiliated* beyond the B.Ed. examination of 1971, (ii) the Management be informed accordingly adding that it shall not make any admissions w.e.f. the session 1971-72 and (iii) a notification to this effect be also issued in two or three papers.

30. The Board considered the Inspection Report of Rajasthan College, Alwar received from Prof. G.N. Sharma, University Department of History who visited the college on 26.3.1971, recommending permanent affiliation for B.A. (Hons.) in History as the college had fulfilled all the conditions of affiliation.

*Resolved to recommend* that as recommended by the Inspector, Raj Rishi College, Alwar be granted permanent affiliation for B.A. (Hons.) in History w.e.f. July, 1971.

31. The Board considered the Inspection Report of S.M.B. Government College, Nathdwara received from Prof. Daya Krishna, Head of the University Department of Philosophy & Psychology, Jaipur who visited the college on 15th March, 1971 recommending provisional affiliation to the college for additional optional subject 'Philosophy' for T.D.C. Arts standard w.e.f. July, 1971 subject to the following conditions :—

A. Staff :

- (1) One Lecturer in Philosophy be appointed w.e.f. July, 1971.
- (2) One more Lecturer be also added w.e.f. July, 1973 when final year T.D.C. class started functioning.

## G. Grants :

Following grants be provided and spent for library books in Philosophy.

Non-recurring Rs. 2,500/-

Recurring : Rs. 4/- per student subject to the minimum of Rs. 750/-

*Resolved to recommend* that provisional affiliation be granted to S.M.B. Government College, Nathdwara for additional optional subject Philosophy w.e.f., July, 1971 subject to the fulfilment of the conditions of affiliation noted above.

32. The Board considered application received from the Principal, Rajasthan Sanskrit Shikshak Prashikshan Vidyapith, Jaipur forwarded by the Director of Sanskrit Education, Rajasthan vide his letter No. D.S.S./Exam./30/8691 dated 29-3-1971 for extension of provisional affiliation of the said college for Shiksha Shastri standard for two years.

*Resolved to recommend* that the provisional affiliation of the above college be extended for one year only and the Management be asked to fulfil the remaining conditions of affiliation.

33. The Board considered letter No. F. 8/25/1677 dated 20-3-1971 from the Principal, Jialal Institute of Education, Ajmer in connection with the objection raised by the University Office against the transgressing of the limit of admissions.

*Resolved that* the Principal be asked to adhere strictly to the maximum limit prescribed by the University viz., two units of 60 students each for the B.Ed. standard.

34. The Board considered applications for extension of provisional affiliation of the following Government and non-Government Colleges affiliated to the University in the Faculty of Sanskrit Studies for the standards noted against each, recommended by the Director of Sanskrit Education Rajasthan, with the remarks that all these colleges were granted provisional affiliation only w.e.f. July, 1970 and that



efforts were being made to fulfil the conditions in a phase programme of two-three years :—

S.No.	Name of the College	Standard
1.	Sarvajanik Shri Sanskrit Mahavidyalaya, Baran.	Acharya and Shastri
2.	Shri Sardul Sanskrit Vidyapith, Bikaner.	—do—
3.	Shri S.P. Rungta Sanskrit Mahavidyalaya, Bagar.	—do—
4.	Government Sanskrit Mahavidyalaya, Chirana.	Shastri
5.	R.B. Seth S.S. Vedang Sanskrit Mahavidyalaya, Chirawa.	Shastri and Achary
6.	Shri Ramanuj Sanskrit Mahavidyalaya, Deedwana.	Shastri
7.	Seth Baldeo Das Bajoria Sanskrit Mahavidyalaya, Fatehpur.	Shastri and Achary
8.	Government Maharaja Sanskrit Mahavidyalaya, Jaipur.	—do—
9.	Shri Digambar Jain Sanskrit Mahavidyalaya, Jaipur.	—do—
10.	Dadu Mahavidyalaya, Jaipur.	—do—
11.	Government Darbar Sanskrit Mahavidyalaya, Jodhpur.	—do—
12.	Sarswati Vidyapeeth, Kota.	—do—
13.	Shri Vithalnath Sanskrit Mahavidyalaya, Kota.	—do—

- |     |  |                     |
|-----|--|---------------------|
| 14. | Shri Sanatan Dharma<br>Sanskrit Mahavidyalapa,<br>Lalsot.                    | Shastri             |
| 15. | Shri Rishikul Brahamcharya<br>Ashram Sanskrit Mahavidyalaya,<br>Laxmangarh.  | —do—                |
| 16. | Government Dhuleshwar<br>Sanskrit Mahavidyalaya,<br>Manoharpur.              | —do—                |
| 17. | Government Sanskrit<br>Mahavidyalaya, Mahapura.                              | —do—                |
| 18. | Pareek Sanskrit Mahavidyalaya,<br>Merta City.                                | —do—                |
| 19. | Birla Sanskrit Mahavidyalaya,<br>Pilani                                      | Acharya and Shastri |
| 20. | Shri Rama Baikunth<br>Mahavidyalaya, Pushkar.                                | —do—                |
| 21. | Government Sanskrit<br>Mahavidyalaya, Sikar.                                 | Shastri             |
| 22. | Shri Vijaysagar Brahamcharya<br>Ashram Sanskrit Mahavidyalaya,<br>Talaogaon. | —do—                |
| 23. | Government Maharana<br>Sanskrit Mahavidyalaya,<br>Udaipur.                   | Acharya and Shastri |
| 24. | Seth Gorakhram Rampratap<br>Chamaria Sanskrit<br>Mahavidyalaya, Fatehpur.    | Shastri             |
- 

In this connection Shri Motilal Joshi (representative of the Director of Sanskrit Education, Rajasthan specially invited to the meeting) informed the Board that—(i) the Directorate of Sanskrit Education had taken effective steps for improving the existing state of affairs in the Sanskrit Colleges, particularly in seven Government Colleges in as much as it was expected that by July, 1971 at least four Lecturers would be

appointed for Shastri classes and two Professors for Acharya classes; in the 14 non-Government Sanskrit Colleges 80% grant-in-aid would be provided by the Government for the fulfilment of the conditions of affiliation and in the case of remaining four colleges which were not receiving grant-in-aid so far, the Government had agreed to provide 50% grant-in-aid so that the over-all position was bound to improve next year.

*Resolved to recommend* that in view of the assurance given by the Director of Sanskrit Education, Rajasthan, provisional affiliation of the aforesaid Sanskrit Colleges for the standards mentioned against each be extended by one year w.e.f. July, 1971 and the Education Commissioner be requested to expedite fulfilment of the conditions of affiliation in these colleges failing which further extension of affiliation would not be possible.

35. It was reported to the Board that—(i) Smt. Gomti Devi College, Badagaon was permitted to start Ist Year T.D.C. class in Commerce w.e.f. July, 1970 pending decision for its provisional affiliation after a local enquiry had been made by the University Inspector appointed for the purpose (ii) the University Inspector visited the college on 29-4-1970 and 5-9-1970 but has most of the conditions of affiliation were found unfulfilled, the Secretary of the College was requested vide Registrar's letter dated 18-2-1971 to comply with the conditions of affiliation and to send a compliance report by 31-3-1971.

In this connection the Board considered the compliance report received from the Secretary of the College vide his letter dated 24-3-1971 and *resolved to recommend* that provisional affiliation be granted to the colleges w.e.f. July, 1970 for T.D.C. Commerce standard for two years i.e. upto and inclusive of the Final Year T.D.C. (Commerce) Examination of 1974 and the College be asked to fulfil all the conditions of affiliation and send a compliance report before the commencement of the next academic session. 1971-72.

The meeting ended with a vote of thanks to the Chair.

Sd:—P.L. Bhatnagar  
Vice-Chancellor.

Sd:—J.N. Mathur  
Dy. Registrar.

## APPENDIX I

*Form of College Inspection Report  
Periodical Inspection.**Standing Report :*

N. B.—On the occasion of the first periodical inspection of a College the inspectors should please prepare a descriptive report containing a statement of facts on the following points about the college.

- ( i ) Foundation and History of the College.
- (ii ) Management.
- (iii) Staff.
- (iv) Finance
- (v ) Buildings.
- (vi) Medical Inspection.
- (vii) Library
- (viii) Enrolment in the College and courses of study.
- (ix) Equipments.
- ( x ) Play grounds.
- (xi) Hostels
- (xii) Tutition and other fees.

*Periodical Reports.*

1. ( i ) Introduction—Date, time and method of the Inspection. Annexure I enclosed
- ( ii ) Previous inspection reports, if any consulted. Report on the periodical inspection of the college during the year 1963-64 (Annexure II enclosed)

Recommendations contained in Previous reports and the extent to which they have been complied with.

Replies of the college authorities regarding compliance of recommendations made are attached.

*Staff and Teaching :*

- |  |  |
|--|--|
| (a) Does the college possess adequate staff.   | Generally yes. Difficiencies have been pointed out under individual departments. |
| (b) Are any members of the staff teaching subjects for which they are not duly qualified ?   | No.  |
| (c) A statement of the teaching staff with qualifications salaries and grades and length of their teaching experience (degree and Post-graduate etc. separately) may be obtained from the college and sent to the University with the inspection report. |  |
| 2 (d) Are the conditions of service, terms of agreement, Provident or pension and Leave Rules satisfactory ?   | Yes  |
| (e) Have any members of the staff outside interests or responsibilities which interfere with proper discharge of their college duties.   | No   |
| (f) If any member of the staff over-worked ?   | No   |
| (g) Does there exist tutorial system in English and Hindi in case where the number of students in a class exceeds 40   | Not applicable   |

3. *Finances :—*

- |  |     |
|--|-----|
| ( i ) Are the finances of the college sound (Income from various | Yes |
|--|-----|

sources in relation to expenditure to be given).

- |       |   |  |
|-------|---|--|
| (ii ) | Are the accounts audited each year.   | Yes  |
| (iii) | Endowments and emergency or reserve funds; how are these invested ?   | Not applicable<br>(Government institution) |
| (iv)  | Whether there is adequate income to meet the normal increments of the staff and the extent to which this is dependent upon an increase in fee income. | Yea  |

#### 4. *Grants :*

- |     |  |                                |
|-----|--|--------------------------------|
| (a) | Are the recurring and non-recurring grants provided and spent in accordance with the requirement of the University for Apparatus, for Practical work, demonstration etc., Models Maps, Charts, Library Books and periodicals and furniture ? | Not applicable                 |
| (b) | Are the Science Departments and the Library properly equipped.   | Library is very well equipped. |

#### 5. *Buildings :*

- |     |  |      |
|-----|--|------|
| (a) | Is there sufficiency in size of the class rooms and laboratory in relation to the maximum number of students to be accommodated. | Yes. |
| (b) | Convenience of the staff, common rooms, private rooms and sanitary arrangements.   | Yes. |
| (c) | Arrangements of fittings of<br>(i) Lecture theatres (ii) Practical rooms   | Yes  |

6. (a) Number of students in each class. Whether there is over-crowding in terms of University Ordinance 72. The number of students, as appointed out in the report, is larger than it ought to be.
- (b) Results of University examinations for the previous 3 years. See the college report
7. Does the college have sufficient play grounds and adequate grant for games. Yes
8. Hostels : Whether the facilities provided are adequate. Yes
9. Is medical examination of the students held. Only at the time of admission.
10. *Summary of Recommendations made by the Inspectors.*
- (1) The intake of students at the time of admissions must not exceed the approved number of 120. The number of admissions during the last academic year was 163. This compromises the training in every subject.
- (2) A workshop for repair and maintenance of equipment is regarded very necessary.
- (3) The main teaching hospital (S.M.S. Hospital) requires considerable improvement in many directions, the most important of which are :—
- (a) A central registration department
- (b) A Central sterilization department.
- (c) An intensive care area.
- (d) A good emergency department.
- (e) An effective laundry.
- (f) Modern kitchens.
- (g) Facilities for incineration.
- (h) Improvement of communications and location.

(i) Establishment of a Psychiatry Outpatient Department.

- (4) Research facilities in the Department of Obstetrics & Gynaecology were found to be absent. This lacuna must be filled.

*Sd/—*  
Bal Krishna Rao

*Sd/—*  
Dr. P. N. Chhutani

*Sd/—*  
Dr. G. P. Talwar



## ANNEXURE I

The inspection was started at 10 A.M. on the 28th November, 1970. The inspectors met the Heads of the various departments in the Principal's office and were given detailed information about the faculty as well as the facilities for training. After detailed discussion of the financial and the administrative aspects, the inspectors individually visited various parts of the College. Professor G.P. Talwar visited the basic sciences departments. Professor B. N. Balkrishna Rao went to the department of Surgery and allied subjects as well as the departments of Obstetrics and Gynaecology, Ophthalmology, E. N. T. and Anaesthesiology Professor P. N. Chhuttani visited the department of Medicine and allied subjects and paid a detailed visit to the hospital and its facilities. When individual inspections were over, the inspectors again met the Heads of the departments and the Principal collectively and discussed various items once afresh.

Report on the periodical inspections of the S. M. S. Medical College, Jaipur on the 28th November, 1970.

The S. M. S. Medical College, Jaipur was inspected by Prof. B.N. Balkrishna Rao, Prof. G.P. Talwar and Prof. P.N. Chhuttani on the 28th November, 1970. We are grateful for the co-operation and the courtesy received by us on this occasion. The Principal was kind enough to provide a document containing statistical data and special features.

We propose to classify our comments under basic department and the hospital.

*Basic Departments* (Anatomy, Physiology & Biochemistry Pharmacology, Pathology and Forensic Medicine).

1. All departments (except Forensic Medicine) have adequate space. It is wasteful to extend and provide more space.
2. The intake of students should be kept as close as possible to the approved number (120). The admissions this year are 163. The training of the students is compromised seriously.
3. In Anatomy, there are only about 20 dead bodies available per year. The faculty may give serious consideration to the renewal and evolution of the teaching curriculum in

this subject with more emphasis on developmental biology, genetics, etc.

4. The laboratory tables of Biochemistry undergraduate laboratory are in a poor condition. They require to be covered with formica/summica or acid resistant paints.

5. It is recommended that microapproach to biochemistry practicals be introduced as early as possible. The capital expense (Rs. 25/— per student) for this switch over will be largely compensated by the savings in reagents and chemicals. The students will get a better and more scientific training.

6. All electronic equipment should be concentrated in rooms that can be provided with temperature and humidity control. This room should also be protected from dust in the interest of prolonging the life span of expensive equipment items.

7. It is most necessary to strengthen the facilities for repair and maintenance of equipment. Technicians and technical officers recruited for this purpose should be given orientation training in maintenance and repair of scientific equipment at places like the Indian Institute of Science, Bangalore, National Physical Laboratory, All India Institute of Medical Sciences, New Delhi and Central Scientific Instruments Organisation, Chandigarh etc.

8. The work of some departments requires cold room ( $0-4^{\circ}\text{C}$ ). This facility need to be provided at least on a joint inter-departmental basis initially. Walkin coolers can be purchased at moderate rates from firms like Blue Star Manufacturing Co.

9. The inspection committee was impressed with the active research and post graduate training programmes in the department of Pharmacology. It noted with satisfaction that steps are being taken to upgrade this department in consonance with others upgraded in the previous years. Till such time that this materializes the department may be encouraged with institutional funds and facilities. There are no posts of Readers/Associate Professors so far. We recommend the creation of at least one post of Reader in this Department at an early instance.

10. In Forensic Medicine, which has a separate University examination, the post of Professor may be created at an

early convenience. Till that time, the Reader in the department should have access to participate in the faculty meetings.

11. The clinical biochemistry tests are at the moment being done in three places under two departments. The Principal assured the committee that this matter is receiving careful attention of the faculty and rationalization is intended in the near future.

12. Subjects like Bacteriology and Biochemistry are new well developed disciplines and should be recognized as such in the teaching, examinations and other functions of the college. There should be separate professorships in these subjects.

### CLINICAL DEPARTMENTS

#### (a) *Surgery and ancillary departments*

A post of Reader in Surgery is vacant and is expected to be filled shortly. A large number of major surgical operations involving special skills are being performed. The staff is qualified for the purpose but it was generally felt that the number of students in a clinic was too great to give adequate attention in bedside teaching. It is found that though the statutory number of admissions to the medical college is 120, more than 150-160 are admitted every year. With the faculty strength remaining stationary, the work load and the absence of clinical instruction to small groups makes a lacuna which needs to be rectified. It is suggested that admissions are strictly limited to the envisaged strength of 120 per year.

The following improvements are suggested in order that better facilities for high standards of professional service may be attained :—

1. The Experimental Surgical Laboratory is a well designed one, where a fair amount of work is going on but is handicapped with insufficient grants. With research as an important activity of a faculty, it is suggested that the grant for this section should be substantially increased.

2. The outpatient department of Surgery is well designed but is overcrowded and cramped. Arrangements for more space may be made which will be of benefit both for service to the public and also facilitate undergraduate and postgraduate training.

3. A minor operation theatre in the O. P. D. with an anaesthetic service is desirable as it will take off the load on the hospital operation theatres.
4. In the operation theatre area, there is considerable crowding of relatives and visitors. A waiting hall would remove this crowding of corridors and operation theatre area.
5. A separate spelic theatre apart from the present operation theatre should be started. It is desirable to separate infected cases and operate on them in a theatre exclusively meant for the purpose.
6. The orthopaedic section is satisfactory. The plaster room is inadequate to cope up with the large volume of work and needs increased work space.
7. Much sophisticated surgical work is being performed and many instruments are old. They needs replacement and also additional equipment is necessary. The present grant is inadequate in view of the special needs and increasing cost of equipment. A special grant would materially help in more useful service.
8. With the multiplicity of operation theatres, and in different areas, a supervisor would be able to streamline the work, organisation and administration of the theatres. It is also important that proper air-conditioning of the operating theatre is a necessity to safeguard the patient during anaesthesia and operation. These should be taken up early.
9. In the Paediatric Surgery Section, there are adequate number of beds, but they appeared to be overcrowded more space is desirable. Neonatal surgery and premature baby care, though attempted now, is unsatisfactory. Proper cubicles with adequate thermostatic control are very important.

#### (b) *Ophthalmology*

This department is an upgraded department with an additional grant of two lacs of rupees. This should be utilised to develop this very important section of hospital service. The staff is adequate and the facilities of Biochemistry and Radiology are quite adequate. There is a satisfactory eye bank. Quite an amount of transplantation work has been done successfully. There is still the need to develop some speciality clinics like orthoptics, ocular pathology, uveitis clinic etc. An ocular microscope and other equipment to perform ocular angiography will help to develop a high quality

of ophthalmic surgery which is already doing a very high standard work.

(c) *Obstetrics & Gynaecology*

The hospital at present is situated 3-4 km. from the Medical College Hospital. It is learnt that a new hospital is to be built close to the Medical College Hospital and action is being taken to expedite construction. However, the following need to be considered and attended :—

1. The vacancy due to the promotion of the present Professor and Head of the Department from the post of Professor of Clinical Obstetrics & Gynaecology needs to be filled early as the quantum of work is quite heavy.
2. It is learnt that there is no separate accommodation for Registrars and House Surgeons. They are at present residing in the Nurses' Hostel. It is hoped that in the new hospital to be built this will be looked after.
3. There is no equipment for any type of research. This is a very important aspect of a postgraduate teaching centre and should be developed.
4. There is only one theatre for gynaecology and obstetrics. Apart from the pressure on the theatre staff and theatre time, it is most undesirable that the two types of operative work should be done in the same area. Even in the present set-up, it is necessary to develop and establish a separate obstetric theatre and the present theatre used for gynaecology should not be used for obstetrical work.

(d) *Anaesthesiology*

With the increasing number of operation theatres and opening of intensive and post-operative wards, the staff strength of the department needs to be enhanced. Increasing area of service would also require more equipment.

(e) *Medicine and Ancillary Departments*

The five units in the department of Medicine are adequate in number. The members of the faculty are well qualified and possess sufficient experience. The department also caters to the training of postgraduates of whom 12 were on active rolls at the time of the inspection. The arrangements for teaching the subject of Medicine in general were satisfactory.

The research activities of the department are also satisfactory. The number of beds in General Medicine is not satisfactory for an admission of 150 students. However, this point is taken up under general comments. Equipment of the department is also satisfactory.

### *S.M.S. HOSPITAL*

S. M. S. Hospital, Jaipur is the main teaching hospital with 913 beds. The hospital was inspected with the Medical Superintendent who is the additional Principal as well as Dr. Sanghvi, the Principal. The main deficiencies are as follows:—

1. Central records department—This is fact, has only one computer clerk and therefore cannot possibly function as the records department of a large hospital. An adequate satisfactory recording system is an essential part of any teaching hospital. Apart from service, even elementary research cannot be done without the existence of minimum facilities in such a department. The present system is totally inadequate and needs a complete reappraisal. This defect should be remedied at the earliest because it interferes at all stages of clinical training in every department.
2. Central Sterilization :—Sterilization of equipment and dressing is now undertaken in different areas. This is very unsatisfactory and wasteful. A department of Central Sterilization is a 'must' for any hospital—far more for a teaching hospital. The economic loss by producing iatrogenic illness which is inevitable in a hospital of this size due to cross infection is so great that the most economical way of tackling this problem is to have a central sterilization system which should be started immediately.
3. Intensive Care Area :—The hospital does not have adequate area set apart for such a purpose. This applied to all clinical departments.
4. Casualty (Emergency) Department :—The casualty department, though functioning and serving the needs, requires reorientation. The casualty department is a very sensitive area wherein the public comes into contact with hospital organization in an emergency and which can be a source for considerable goodwill or otherwise. It is suggested that :—

- ( i ) The Casualty department be set up as a separate entity from the outpatient department;

( ii) There should be postgraduates or special staff in charge round the clock;

(iii) Adequate facilities and equipment for treatment and resuscitation of a seriously injured or sick person should be provided;

(iv) Six beds for observation and management should be provided.

5. *Laundry* :—A future plan needs to be made for an effective laundry service. The present laundry can also be improved considerably.

6. *Kitchens* :—The hospital kitchens are situated on the roof and function under primitive conditions. There is neither fly-proofing nor a hot water supply nor proper arrangements for cleaning of utensils.

7. *Hospital Workshop* :—Some repair work is going on alongside the laundry in the basement, but a hospital of this size requires a modern workshop. Otherwise the hospital efficiency cannot be maintained.

8. *Incineration* :—There is a non-functioning small incinerator in the compound of the autopsy room. The hospital garbage was found scattered in the same compound with cows and buffaloes feeding on it and we do not think one can paint a more depressing picture than the one we saw. For a premier University hospital this state of affairs needs no comment.

9. *Communications in the hospital* :—Like most hospitals in the country, S. M. S. hospital has no adequate paging (location) system. This leads to enormous wastage of time of trained personnel and is a rudimentary facility that teaching hospitals must insist on providing.

10. *Psychiatry outpatients* :—S. M. S. Hospital has no psychiatry outpatients. All the patients are referred to the mental hospital. This is unsatisfactory because in modern times such patients must not be referred to asylums.

Sd/—

Prof. B.N. Balkrishna Rao

Sd/—

Prof. P. N. Chhuttani

Sd/—

Prof. G.P. Talwar

## APPENDIX-I

<i>S.No.</i>	<i>Name of the College</i>	<i>Standard</i>
1.	Govt. College, Ajmer.	(i) LL.B. (ii) B.A. (Hons.) Geography.
2.	G.D. Govt. Girls College Alwar.	T.D.C. (Arts & Science).
3.	Sophai Girls College, Ajmer.	Additional optional subjects Home-Science and Psychology.
4.	Govt. College, Banswara.	T.D.C. (Arts, Science and Commerce).
5.	M.L.V. Govt. College, Bhilwara.	(i) M.Com. (In all groups) (ii) B.A.(Hons.) in Economics, Geography, Hindi and History. (iii) M.Sc. Physics.
6.	Govt. College, Bundi.	(i) P.U.C. & T.D.C. (Science) (ii) T.D.C. (Arts) Additional optional subject Geography.
7.	Govt. College, Baran.	P.U.C. & T.D.C. (Arts, Science and Commerce).
8.	Dungar College, Bikaner.	LL.B.
9.	M.S.J. College, Bharatpur.	(i) M.A. (Hindi). (ii) M.Sc. Physics. (iii) T.D.C. (Arts, Science and Commerce). (iv) B.A. (Hons.) Political Science, Philosophy and History.
10.	Govt.College,Chittorgarh.	T.D.C. (Science & Commerce).
11.	B.V. College of Arts and Science, Banasthali.	(i) M.Sc. Chemistry. (ii) Post M.A. Diploma in Linguistics (Hindi).



1	2	3
		(iii) Certificate and Diploma Course in Russian Language.
		(iv) M.A. Drawing and Painting.
		(v) T.D.C. & P.U.C. (Science).
12.	Govt. College, Dausa.	(i) P.U.C. (Science). (ii) T.D.C. (Arts & Commerce). (iii) Additional optional subject Elements of Banking for P.U.C. (Commerce).
13.	S.P.U. Collegee, Falna.	T.D.C. & P.U.C. (Arts & Commerce and P.U. Science).
14.	Seth G.R. Chamarla College, Fatehpur.	T.D.C. Science and Commerce.
15.	S.S. Jain Subodh College,	T.D.C. (Arts, Science and Commerce).
16.	Agarwal College, Jaipur.	T.D.C. (Arts, Science and Commerce).
17.	Kanoria Mahila Mahavidyalaya, Jaipur.	I. T.D.C. (Arts). II. Addl. Optional subject Public Administration for T.D.C. Arts. III. B.A. Hons. in Hindi. IV. B.A. Hons. in English. V. B.A. Hons. in Pol. Science.
18.	Government College, Jhalwar.	T.D.C. (Commerce).
19.	Government College, Jaisalmer.	I. T.D.C. Arts. II. T.D.C. Commerce.
20.	Government College, Jalore.	T.D.C. (Arts and Commerce)
21.	Government College, Kotputli.	Pre-University & T.D.C. Science.

1	3	3
22.	Government College, Karauli.	I. T.D.C. (Arts, Science & Commerce). II. P.U. Arts.
23.	Govt. College, Kishangarh.	I. T.D.C. (Arts). II. T.D.C. Science. III. T.D.C. (Com.)
24.	Govt. College, Kota.	I. M.Sc. Physics. II. M.Com. a) Acctty. & Stat. b) Bus. Amn. c) Applied Econ. & Finance.
25.	M.L. Govt. College, of Science, Ladnun, (Jaswantgarh).	T.D.C. (Science).
26.	Bhagwandas Todi College, Lachbmagarh.	I. T.D.C. (Arts, Science & Commerce). II. P.U. Science.
27.	Seth G.B. Podar College, Newalgarh.	S. T.D.C. (Science).
28.	Govt. College, Pratapgarh.	T.D.C. (Arts).
29.	Saboo College of Commerce, Pilani.	T.D.C (Commerce).
30.	Government College, Shahpura (Bhilwara).	T.D.C. (Commerce)
31.	S.B.D. Govt. Gollege, Sardarshar.	I. T.D.C. (Arts & Commerce) II. P.U.C. (Science).
32.	S.G.N. Khalsa College, Sriganganagar.	M.Sc.Bot.,Zool.,& Chemistry
33.	Government College, Sriganganagar.	M.A. Economics & Pol. Science.

1	2	3
34.	Shri Kalyan College, Sikar.	I. T.D.C. (Arts). II. T.D.C. (Sc.). III. T.D.C. (Com.).
35.	Govt. College, Sirohi.	T.D.C.)Arts, Sc., & Commerce).
35.	Ch. B.R.G. Govt. Girls' College, Sriganganagar.	I. P.U.C. & T.D.C. Science. II. P.U. Arts & Addl. optional subject Home Science for T.D.C. (Arts).
37.	Sonadevi Sethia Girls College, Sujangarh.	P.U.C. & T.D.C. (Arts).
38.	Maherishi Dayanand College, Sriganganagar.	P.U.C. & T.D.C. Science.
39.	Govt. College, Tonk.	T.D.C. Science.
40.	Savitri Girls College, Ajmer.	I. T.D.C. Science. II. M.A. History. III. M.A. Hindi & Economics.
41.	Rajasthan Vidyapith Sharamjeevi Evening College, Ajmer.	T.D.C. (Arts).
42.	Raj Rishi College, Alwar.	1. T.D.C. (Sc.). 2. B.A. Hons. Geography. 3. I. M.A. Econ. II. M.Sc. Chem. III. M.Com. in all the three Groups. 4. LL.B. (Three years course).
43.	Govt. College, Sambhar.	I. T.D.C (Com.). II. T.D.C. (Arts).
44.	Dayanand College, Ajmer.	LL.B. Three years Course.
45.	Nehru Memorial College, Hanumangarh Town.	T.D.C. & P.U.C. (Arts & Science).

1	2	3
46.	Sharda Sadan College. Mukndgarh.	P.U.C. (Arts & Commerce).
47.	Indira Ghandi Balika Niketan Girls Degree College, Ardawata.	I. T.D.C. (Arts). II. T.D.C. (Science)
48.	Govt. College, Barmer.	I. T.D.C. (Arts, Sc., and Commerce).
49.	Gyani Ram Harak Chand Sarawagi Govt. College of Arts and Commerce, Sujangarh.	T.D.C. (Arts & Commerce).
50.	Seth G.L. Bihani S.D. (P.G.) College, Sriganganagar.	LL.B. & T.D.C. Science.
51.	Jain Teachers Training College, Alwar.	B.Ed.
52.	Shri Bajrang Teachers Training, Deeg.	B.Ed.
53.	Jawahar Lal Nehru Teachers Training College, Kota.	B.Ed.
54.	Hitkrai Co-operative College of Education, Kota.	B.Ed.
55.	Govt. Teachers Training College, Bikaner.	M.Ed.
56.	Gandhi Teachers Training College, Gulabpura.	B.Ed.
57.	S.P. Medical College, Bikaner.	1. M.Sc. Med.Bio.Chem. 2. M.D. Paediatrics & D.C.H. 3. M.S. (E.N.T.). 4. D.A. 5. D.T.C.D. 6. D.M.R.D. & D.M.R.T.

1	2	3
58.	R.N.T. Medical College, Udaipur.	M.S. Ophthalmology.
59.	Dr. S.N. Medical College, Jodhpur.	Final M.B.B.S.
60.	Govt. College, Nagaur.	T.D.C. (Sc.).
61.	Govt. College. Nim-Ka-Thana.	1. T.D.C. (Arts & Science and Commerce). 2. P.U.C. (Arts, Sc. & Com.).
62.	Shri Jain (P.G.) College, Bikaner.	M.Com. All Groups.
63.	G.V. College of Agriculture, Arts & Sc., Sangaria.	1. P.U.C.&T.D.C. (Arts Sc.). 2. P.P. & B.Sc.Ag.
64.	Shri Madan Mohan Malaviya Govt. Ayurvedic College, Udaipur.	1. Pre-Ayurveda. 2. Ayurvedachary.
65.	Shri Narayan Ayurvedic College, Jodhpur.	Pre-Ayurveda.
66.	Govt. Ayurvedic College, Jaipur.	1. Pre-Ayurveda. 2. Ayurvedacharya.
67.	Bangur College, Pali.	T.D.C. Science.
68.	Govt. College, Dholpur.	T.D.C. Science.
69.	S.M-S. Medical College, Jaipur.	1. M.S. Anaesthesiology. 2. M.Sc. (Med.Bio-Chem.) 3. D.M.R.T. & D.M.R.D.
70.	S.M.B. Govt. College, Nathdwara.	T.D.C. (Arts Science, &
71.	Govt. College, Kota.	B.Sc. (Hons.) Physics.

1	2	3
72.	Govt. College, Sriganganagar.	1. M.A. Hindi. 2. M.A. Geography.
73.	S.D. Govt. College, Beawar.	1. M.A. Hist., Pol.Sc. 2. T.D.C. (Arts-Music (Vocal).
74.	M.S. College for Women, Bikaner.	I. Yr. T.D.C. Science. II. Yr. T.D.C. (Arts-Home Science.
75.	P.R. Ayurvedic College, Sikar.	I. Pre-Ayurveda. II. I Ayurvedacharya.
76.	L.B.S. College, Jaipur.	T.D.C. Science.
77.	Gopal College, Dungarpur.	T.D.C. Science and Commerce).

## APPENDIX III

Periodical Inspection Report of R.R. College, Alwar selected for Inspection during 1969-70. Date of Inspection 17-3-1971.

*Position of Science Laboratories**Chemistry Deptt.*

It is strange that there is one common Laboratory for B.Sc. (IIYr. T.D.C. III Yr. T.D.C.) M.Sc. (Prev.), M.Sc. (Final) Inorganic and M.Sc. (Final) Organic. Atleast the following separate laboratories should be there :

- (1) One Lab. for M.Sc. (Prev.)
- (2) One Lab. for M.Sc. (Final) Inorganic
- (3) One Lab. for M.Sc. (Final) Organic.

There is no separate professors room also which should be provided atleast in a Postgraduate Department. The provision for stores is also very inadequate.

*Physics Deptt.*

One Laboratory for B.Sc. students should be provided one professor's room.

*Botany Department :*

One laboratory for working capacity for 40 students should be provided extra. There is no lecture theatre attached to the laboratories for the demonstration experiment, it should be provided, when more emphasis is being made teaching of science subjects with experimental demonstrations technique. space for museum should also be provided.

*Zoology Deptt :*

One extra laboratory should be provided to accommodate 40 students.

One living animal house is a 'must' for the department.

All the Science Departments are well equipped except with the awful lack of adequate lab. accommodation. The College is running M.Sc. Chemistry classes also so atleast the Government should be asked to provide the basic minimum facilities for a post-graduate department.

*Commerce*

Regarding Faculty of Commerce which Commerce M.Com. classes in all its three department. The following observation are made :—

1.        On the basis of the existing work load position one lecturer in Bus, Administration is needed.
2.        There is only one P.G. Head namely in the Deptt. of Economic Administration and Finance Management. As such two more post graduate heads one each for the deptt. of the Bus. Admn. and Accountancy and Bus. Stats. should be provided.
3.        More funds are needed for Library and the reading room so that important books and generals may be added for the benefit of the students and staff. This is in addition to the provision made at the time of affiliation given to M.Com. classes. It is proposed that an additional sum of Rs. 10,000 be provided for books. As for Generals suitable recurring grant is to be provided so that more periodicals may be subscribed for.

*Building :*

The general position of the existing building's is extremely deplorable and immediate steps should be taken to see that adequate funds are provided for its proper maintenance. There is an over all shortage of class room accommodation in the College.

Sd/-R.L. Mittal  
*Co-Inspector*

Sd/-S.C. Tela  
*Convener*

Sd/-R.G. Sarien,  
*Co-Inspector.*



## APPENDIX IV

Summary of Recommendations of the inspection of  
Pareek Teachers Training College, Jaipur

29 व 30 अगस्त तथा 1 सितम्बर 1969 को राजस्थान विश्व-विद्यालय की ओर से श्री के० एल० वर्मा तथा श्री एस० एस० सक्सेना ने इस कालेज का निरीक्षण किया था। उसके बाद से अब तक की परिस्थितियों में कोई परिवर्तन दिखाई नहीं पड़ता है। उदाहरण के लिये :—

इस वर्ष जुलाई 1970 से फरवरी 1971 तक पढ़ाई के लिये 120 छात्रों का एक ही सेक्शन चला है जबकि नियमानुसार दो सेक्शन होने चाहिये थे। मार्च 1971 से ही दूसरा सेक्शन आरम्भ हुआ है।

अभी भी स्थायी अध्यापक 6 हैं तथा 3 पार्ट टाइम अध्यापक लगे हुए हैं। प्रिंसिपल की नियुक्ति आज तक नहीं हुई है और न निकट भविष्य में होने की सम्भावना है। प्रोफेसर का स्थान भी खाली है। वर्तमान कार्यवाहक प्रिंसिपल का नाम रजिस्टर पर तीसरे स्थान पर है। उनके पहले के दो स्थान खाली पड़े हुए हैं। वर्तमान कार्यवाहक प्रिंसिपल को लेक्चरर का ग्रेड मिला हुआ है।

अध्यापकों के एग्रीमेंट फार्म नहीं भरे गये हैं। उन्हें 285 रु० से आरम्भ होने वाला वेतन ग्रेड मिला हुआ है तथा कुल 35 रु० मंहगाई के मिलते हैं।

ट्रेनिंग कालेज की अपनी कोई बिल्डिंग नहीं है। न छात्रावास के लिये अपनी बिल्डिंग है। पारीक एकाडेमिक कालेज की जो बिल्डिंग है उसी में हमारे जिफ्ट में ट्रेनिंग कालेज चलता है। यही ग्राम को इवनिंग कालेज चलता है।

ट्रेनिंग कालेज की जो बनती हुई बिल्डिंग दिखाई गई है वह कई वर्षों से इसी तरह बन रही है और अभी कई वर्षों में पूरी होगी क्योंकि धन का अभाव बताया गया।

यदि कई वर्षों के बाद यह बिल्डिंग बन भी गयी तो यह ट्रेनिंग कालेज के लिये इस्तेमाल होगी या इनके हाई स्कूल के लिये, इसकी कोई गारन्टी नहीं है क्योंकि गहर में इनका जो हाई स्कूल चल रहा है उसके लिये बिल्डिंग की आवश्यकता है और उसे इधर ही लाने का विचार है।

छात्रावास ट्रेनिंग कालेज का नहीं है। ट्रेनिंग कालेज के कुछ छात्र उसमें रहते हैं। ज्यादातर छात्र शहर में इधर उधर रहते हैं। छात्रावास की देख रेख के लिये कोई वार्डन तथा वार्डन क्वार्टर नहीं हैं। हाजरी की कोई व्यवस्था या रजिस्टर नहीं है। छात्राग्यों के लिये रहने की कोई व्यवस्था नहीं है जबकि उनकी संख्या 42 है।

ट्रेनिंग कालेज में न कहीं साइकोलोजी लेव है न साइन्स लेव। न आर्ट क्रेफ्ट रूम न कामन रूम। एक छोटी सी लाइब्रेरी है लेकिन रीडिंग रूम दिखाई नहीं पड़ा। जब बिल्डिंग नहीं कमरे नहीं, तब फरनीचर तथा एक्विपमेंट रखने के लिए ही कहां व्यवस्था हो सकती है ?

ट्रेनिंग कालेज के नाम कोई धनराशि अभी तक जमा नहीं की गई है। पारीक एकेडेमिक कालेज की प्रबन्ध समिति का एक प्रस्ताव जरूर देखने में आया जिसमें तय किया गया है कि जब तक ट्रेनिंग कालेज का एक लाख रुपया इकठ्ठा नहीं तब तक पारीक एकेडेमिक कालेज के फंड का एक लाख रुपया ट्रेनिंग कालेज का समझा जाय। अभी तक दस हजार रुपया भी ट्रेनिंग कालेज के नाम से जमा नहीं है।

यहां ट्रेनिंग कालेज का कोई वातावरण हमें दिखाई नहीं पड़ा सिवाय इसके कि दो कमरों में अव्यापक छात्रों को पड़ा रहे थे (पारीक एकेडेमिक कालेज की बिल्डिंग में) इसके प्रबन्धक श्री गोपाल लाल पुरोहित जो सब कुछ हैं, (कार्य वाहक प्रिंसिपल का तो केवल नाम है) वे इस ट्रेनिंग कालेज को खोलकर पछतावा प्रकट कर रहे थे और कह रहे थे कि उनके पास धन का सर्वथा अभाव है इसलिये ट्रेनिंग कालेज की स्थिति में जल्दी ही कोई सुधार सम्भव नहीं है।

हम नहीं समझते कि इस उत्साहहीनता से और दरिद्रता से ट्रेनिंग कालेज चलाने में शिक्षा के प्रति किसी प्रकार का न्याय हो रहा है। बल्कि इस प्रकार के ट्रेनिंग कालेजों को देखकर ही अनेक व्यक्तियों के दिल में यह इच्छा पैदा हो जाती है कि वे सभी ऐसे कालेज तो आसानी से चला सकते हैं। इस प्रकार वागेस ट्रेनिंग कालेज खोलने को प्रोत्साहन मिलता है।

यदि यूनिवर्सिटी ऐसी स्थिति से ही सन्तुष्ट है तब तो ठीक है अन्यथा इस ट्रेनिंग कालेज से निकट भविष्य में किसी प्रगति की आशा नहीं की जा सकती है। जहां 6 वर्ष बीत जाने पर भी किसी प्रिंसिपल की नियुक्ति नहीं की गई हो और अब भी इसी तरह बकेलने की प्रवृत्ति हो वहां क्या आशा की जा सकती है ?

स्पष्ट है कि यूनिवर्सिटी की कम से कम शर्तें (Minimum requirements) पूरी नहीं की गई है अतएव स्थायी स्वीकृति देने का प्रश्न ही नहीं उठता है। इस कालेज को एक दिन भी आगे चलाने की स्वीकृति नहीं मिलनी चाहिये।

Sd/—

*M.C. Singhal*

Convening Inspector &  
Dean, Faculty of Education.

इसकी कुछ विशेषतायें :

- (1) यहां तक हजार रुपये भी कालेज के नाम जमा नहीं है।
- (2) 6 वर्ष बीतने पर भी कालेज की अपनी कोई बिल्डिंग नहीं। छात्रावास नहीं न निकट भविष्य में कोई उम्मेद।
- (3) 2 वर्ष तक केवल 4 लेक्चरर तथा 4 वर्ष तक 6 लेक्चरर ने ही काम चल रहा है। प्रिंसिपल है न प्रोफेसर। कार्यवाहक प्रिंसिपल को 285-800 का ग्रेड मिल रहा है कोई अलाउन्स भी प्रिंसिपलशिप का नहीं।
- (4) जहां के पुस्तकालय में एक भी डेली पेपर या विकली पेपर हिंदी या अंग्रेजी में नहीं आता।
- (5) जहां फर्नीचर के नाम पर एक मेज या एक कुर्सी भी नहीं खरीदी गई है।

## APPENDIX IX

Minutes of the meeting of the Building Committee held on 16th March, 1971 at 3.30 p.m. in the Vice-Chancellor's Chamber in the Administration Block.

### Present

1. Dr. P.L. Bhatnagar, Vice-Chancellor (in the chair)
2. Shri R.M. Advani.
3. Shri C.B.L. Mathur.
4. Shri K.L. Verma.
5. Dr. B.K. Gupta.
6. Shri I.D. Bhargava.
7. Dr. B.D. Tikkiwal.

Shri L.P. Vaish Offg. Registrar.

Shri S.L. Ajmera. Dy. Registrar (Accounts & Finance)

Shri S.D. Tiwari. Offg. University Engineer-Member Secretary.

(N.B. Shri Prithvi Singh and Shri R.L. Mishra could not attend the meeting)

The minutes of the least meeting held on 25th September, 1969 were confirmed with the modification that the meeting of the Building Committee should be invited at least twice in a year.

2. The Committee considered the report of the University Engineer with regard to shortages & excesses occurred in Cement & steel material in stores for the period from April, 1961 to December, 1965.

*Resolved* that the matter does not come under the purview of the Building Committee. The Vice-Chancellor Syndicate may decide the issue in the light of recommendations made by Shri Hari Singh Chaudhary. Further, resolved that the position of stores & stock account be prepared every year and put up to Vice-Chancellor/Syndicate.

3. *Resolved* that a factual report of the cases pertaining to Shri Johari Lal Contractor together with the recommendations of Shri Hari Singh Chaudhary, Chief Engineer Irrigation, Jaipur and Shri Hari Dutta Gupta, Additional

Chief Engineer (PWD B & R) and Vice-Chancellor's orders dated 19-8-73 be put in the next meeting.

4. The committee considered the estimates of the following works for according technical sanction :—

- (i) Accoustic arrangements in the Humanities Hall in the University campus. Rs. 21,850/-
- (ii) Construction of central work-shop for Science Department in University campus. Rs. 114,000/-
- (iii) Construction of Students Activities centre in Maharani's College, Jaipur. Rs. 95,000/-
- (iv) Construction of extension to the Administrative Block on the south east side with basement & ground floor in the University campus. Rs. 93,440/-
- (v) Construction of building for the department of Botany in University campus. Rs. 5,89,600/-
- (vi) Construction of Common Hall on first floor of J.C. Bose hostel in University campus. Rs. 28,900/-
- (vii) Construction of Common Hall on first floor of Dadabhai Naroji Hostel in University campus. Rs. 28,900/-
- (viii) Providing pavement in the space lying on the eastern & western wings of the Humanities Hall in University campus. Rs. 24,600/-
- (ix) Construction of extension to the existing N.R.S.C. building & construction of 4 lecture theatres in Maharani's college. Rs. 1,51,000/-

*Resolved* that the technical sanction of the following estimates be accorded and other cases be postponed for the next meeting.

1. Accoustic arrangements in the Humanities Hall in the University Campus. Rs. 21,850/-
2. Construction of Central work-shop for Science department in University campus. Rs. 114,000/-

3. Construction of Students Activities Centre in Maharani's College, Jaipur. Rs. 95,000/-
4. Construction of extension to the Administrative Block on the south east side with casement & ground floor in the University campus. Rs. 93,440/-

5. With reference to Finance Committee Res. No. 7 dated 27-2-71 to consider & approve the plans to the proposed construction of 12 quarters for class IV Staff, 8 quarters for Ministerial Staff, 4 quarters for Administrative Officers and 12 quarters for Lecturers in the University campus.

*Resolved* that the case be postponed for the next meeting and the office be asked to circulate complete plans and estimates to the members in advances.

6. The Committee considered the tenders for the construction of extension to the Administrative Block on the south east side with basement & ground floor in the University campus together with the explanatory note as per Appendix 'A'.

*Resolved* that the work be allotted to Shri Chetan Singh, at the rate of 69% over and above schedule 'G' as approved by the P.W.D.

The meeting ended at 5.30 p.m. with a vote of thanks to the Chair.

Sd/-P L. Bhatnagar  
Vice-Chancellor

Sd/-S.D. Tiwari  
Offg. University Engineer.

## APPENDIX A

Sub—Construction of extension to the Administrative Block on south east side with basement and ground floor at University campus.

Tenders for the above work were invited through press vide this office letter No. UE/NIT/4850 dated 6-1-1971, due on 4-2-1971. Following four tenders were received on due date.

1. Shri S.B. Mittal, Contractor 70.91% over & above Schedule 'G'.
2. Shri Satya Prakash, Contractor 73.87%        "
3. Shri Radhey Shyam Khandelwal 76.02%        "
4. Shri Chetan Singh, Sanganer 82.95%        "

The above tenderers were called for negotiations on 13-3-1971 at 3.30 p.m. in the chamber of Registrar, where the following were present for negotiations with the contractors.

1. Shri P.L. Vaish, Registrar.
2. Shri S.L. Ajmera, Dy. Registrar (A & F).
3. Shri S.D. Tiwari, University Engineer.

After negotiations the contractors gave the revised rates as follows.

1. Shri S.B. Mittal 65.90% over & above Schedule 'G'.
2. Shri Chetan Singh 69.00%        "
3. Shri S. Prakash 69.11%        "
4. Shri Radhey Shyam

The Committee considered the cases of all the four tenderers and their revised rates and their past performances in the University in detail.

Shri S.B. Mittal who quoted the revised rates after negotiations @65.90% over and above schedule 'G' is the lowest one. Mr. Mittal took only one contract in the University i.e. (i) Laying cement concrete flooring for Katcha strips for existing cycle Shed in Maharaja's College, Jaipur Rs. 5,117.86 (ii) Laying cement concrete foot paths in quadrangle North of open Air Theatre Maharaja's College—Rs. 1,518.09. (iii) Laying 2½" thick C.C. flooring for approach road on the east of cycle shed Maharaja's College—Rs. 2,337.84. From these works it was observed that he had done only road work and

not building work in the University. These works too he could not do with the satisfaction of this office as well as Dr. G.C. Patni, Dean, University Studies in Science. Dr. Patni informed the Vice-Chancellor in a meeting regarding unsatisfactory work of the contractor and desired that he should not be paid amount till he verifies the work. As a result, the defects in the work were got rectified by the Department and the cost for it was recovered from his final bill.

Mr. Chetan Singh is also a new contractor, but he is the nephew of Shri Birdhi Chand contractor. Shri Birdhi Chand contractor who has constructed the Kasturba Hostel and is now constructing students Activities centre at Maharani's College, has given an under-taking to supervise the work. He has done the work in time and with full satisfaction of the University. He has quoted the revised rates @ 69.00% over and above schedule 'G' these are the second lowest rates.

Other contractors who have quoted the revised rates @ 91.11% and 96.50% are the third and fourth lowest.

Shri S.B. Mittal has quoted the lowest rates but in view of the fact that his earlier work as mentioned above was not satisfactory and his financial position is also not reported to be satisfactory, the committee recommends that the work of construction of extension to the Administrative Block may be given to Shri Chetan Singh contractor for whom Shri Birdhi Chand contractor has given an undertaking to complete the work satisfactorily and within stipulated period. Acceptance of the second lowest tenderer would make a difference of about Rs. 1800/- only which is not significant. It is, however, stated that the rates quoted by Shri Chetan Singh are even lower than the Original lowest tendered rates.



MINUTES OF THE MEETING OF THE ACADEMIC  
COUNCIL HELD ON FRIDAY, THE 23rd APRIL,  
1971 AT 11.30 A.M. AT THE UNIVERSITY  
OFFICE, JAIPUR.

Present :

Prof. P.L. Bhatnagar, Vice-Chancellor

(In the Chair)

- |                             |                             |
|-----------------------------|-----------------------------|
| 2. Prof. B.D. Tikkiwal      | 3. Principal B.N. Consul    |
| 4. Prof. B. Tiagi           | 5. Prof. Daya Krishna       |
| 6. Dr. Dharmendra Kumar     | 7. Prof. G.C. Pande         |
| 8. Prof. G.C. Patni         | 9. Prof. G.S. Sharma        |
| 10. Principal Govind Narain | 11. Dr. Indra Pal           |
| 12. Dr. J.N. Tandon         | 13. Shri K.L. Bordia        |
| 14. Dr. K.S. Mathur         | 15. Dr. Kashi Prasad        |
| 16. Dr. M.A. Zaidi          | 17. Principal M.L. Bhargava |
| 18. Dr. M.L. Gupta          | 19. Dr. M.L. Mishra         |
| 20. Principal N.M. Kothari  | 21. Prof. Om Prakash        |
| 22. Prof. P.L. Bhargava     | 23. Principal P.N. Mathur   |
| 24. Prof. P.S. Sundaram     | 25. Prof. R.C. Mehtora      |
| 26. Prof R.G. Sarien        | 27. Principal R.M. Advani   |
| 28. Shri R.V. Sakhalkar     | 29. Principal S.C. Tela     |
| 30. Prof. S.P. Varma        | 31. Prof. Sarnam Singh      |
| 32. Prof. T.K.N. Unnithan   | 33. Shri U.S. Gour          |
| 34. Prof. Ziauddin Khan     |                             |

Shri L.P. Vaish, Offg. Registrar

Before proceeding with the business on the agenda the Vice-Chancellor on his own behalf and on behalf of the members of the Council accorded a cordial welcome to the new members.

At this stage a member of the Council with the permission of the Chair moved the following resolution :

“The Academic Council of the University of Rajasthan :

*has noted*, with deep concern and anxiety, the massacre of tens of thousands of human being in the Bangla Desh, involving the systematic killing of a large number of professors and students in the University of Dacca and at other academic centres in the country,

*places on record* its deep sense of anguish at the terrible sufferings ruthlessly inflicted day after day on the vast massess of humanity in Bangla Desh on account of the burning and plundering of entire villages and raping of their womenfolk,

*expresses its* heartfelt sympathy and admiration for the the valiant fight the heroic people of Bangla Desh are putting against military forces using modern weapons of mass killing, and

—*Urges upon* the Government of India—(a) to invoke international assistance through the United Nations and its Specialised Agencies for sending Red Cross and other help for the relief and rehabilitation of refugees incessantly pouring into the bodering Indian states and (b) to give immediate recognition to the duly constituted Government of Bangla Desh.”

*Resolved that* the aforesaid resolution be adopted.

1. The minutes of the meeting of the Academic Council held on the 13th & 15th February, 1971 were taken up for confirmation, together with a letter No. 1114/70-71 dated the 10th March, 1971 from Shri U.S. Gour, Head of the University Deptt. of Adult Education (Teaching Wing), forwarding his comments on the minutes.

*Resolved that* the minutes be *confirmed* with the following modifications :

## (I) Ref : Resolution No. 23 (II) :

Substitute 'should' for 'may' in the second sentence which would then read as follows :

"The Council, however, desired that the Head the University Department of Adult Education (Teaching Wing) should be invited to attend the meetings of the Board of Studies in Education, as a special invitee."

## (II) Ref : Resolution No. 27 (II) :

Insert 'M.B.A.' after 'M.Com.' so that the resolution would read as follows :

"The Scheme 'A' (full Internal Assessment) be allowed for the present only for the M.A., M.Sc., M.Com., M.B.A. and LL.M. examinations."

2. With reference to the Syndicate Resolution No. 20 (v) dated 10.3.1971 the Council *resolved to recommend* that as suggested by the Syndicate the amendment to O.92 of the University Hand Book Pt. II as proposed by the Council vide its Res. No. 40 dated 13/15.2.1971, be made effective from the admissions to be made for the session 1971-72.

3. With reference to the Syndicate Resolution No. 20 (III) dated 10.3.1971 the Council *resolved to recommend* that as suggested by the Syndicate the revised rule of securing at least 60% marks in the aggregate at the Previous Examination of M.A./M.Sc./M.Com. for permitting a candidate to offer Dissertation/Field Work/Survey Report/Thesis in lieu of a paper (proposed by the Council vide its Res. No. 28-II dated 13/15.2.1971) be made applicable w.e.f. the admissions to be made to the Final class of the M.A./M.Sc./M.Com. in July, 1972 and onwards.

N.B.: Prof G.C. Pande, however, suggested that it could be referred to the Faculty of Arts first.

4. With reference to its Resolution No. 28 (XIV) dated 13/15th February, 1971 deferring consideration about the grade marks, the Council considered a letter No. F. 33-56/61 (CD) Pt. II dated 1.3.1971 from the Secretary, University Grants Commission, New Delhi communicating the views of a Joint meeting of the University Grants Commission and the Inter-University Board of India & Ceylon on the subject of uniformity of marks for classification of division at the the Post-graduate examinations and introduction of the system of awarding relative grades.

Resolved that the aforesaid letter of the University Grants Commission be referred to the Examination Reforms committee.

5. The Council considered the recommendations of the Faculty of Commerce made at its meeting held on 15th and 16th March, 1971.

*Resolved to recommend* that the recommendations of the Faculty be approved with the following modifications/observations :

(I) *Ref : Recommendation No. (6) :*

This recommendation be put up for consideration before the Academic Council alongwith the recommendations of other faculties when available, and meanwhile the Faculty of Commerce be also asked to give its recommendations on other suggestion regarding examination reforms.

(II) *Ref : Recommendations Nos. 8 & 9 :*

The above recommendations be not accepted.

(III) *Ref : Recommendation No. (10) :*

The recommendations be recorded as it was reported to the Council that the matter had been referred by the Syndicate (vide its Res. No. 24 dated the 17th April, 1971) to the Finance Committee.

(IV) *Ref : Recommendation No. (12) :*

The courses of study as recommended by the Faculty to be introduced w.e.f. July, 1971 for the various examinations be *accepted* together with the following syllabus/list of books recommended by the Conveners concerned as authorised by the Faculty (*vide Appendix 1*).

- (a) Syllabus and list of Books for the papers on Industrial Psychology and Industrial Sociology for the First Year T.D.C. Examination.
- (b) List of books for Paper-I 'Business Communication & Salesmanship' for the Second Year T.D.C. Examination.
- (c) List of books for Paper-I 'Company Law & Secretarial Practice' prescribed for third Year T.D.C. examination.
- (d) List of books for the papers on (i) Labour Legislation and (ii) Industrial Relations for the 2nd Year and 3rd Year T.D.C. examinations.
- (e) List of books for the Paper—'Indian Economic Administration' prescribed for the First Year T.D.C. Examination.

(V) *Ref : Recommendation No. (14) :*

Consequential amendments to the relevant Ordinances and Regulation 18 be made as given *vide Appendix II* and the Faculty be requested to amend O.55 of the University Hand Book Part II in the light of the revised Scheme of examination.

6. The Council considered the recommendations of the Faculty of Arts made at its meeting held on the 10th February, 1971.

*Resolved to recommend* that the recommendations of the Faculty be approved with the following modifications/observations :

- (I) Ref : Recommendations Nos. 5, 11 & 14 reg. introduction of the proposed Diploma Course in Public Administration, a Course in Comparative Indian Literature and Advanced Diploma Courses in Modern European Languages, namely, German, Russian and French :

See Resolution No. 10 of these minutes.

- (III) *Ref : Recommendation No. (19) :*

A committee consisting of the following members be appointed to examine the proposal of the Faculty and the report of the Committee be placed before the Faculties of Arts, Science and Commerce for consideration :

- (1) Dean, Faculty of Arts (Convener)
- (2) Dean, Faculty of Science
- (3) Dean, Faculty of Commerce
- (4) Prof. T.K.N. Unnithan
- (5) Head of the University Deptt. of English.
- (6) Head of the University Department of Hindi
- (7) Prof. G.C. Patni.

- (IV) *Ref : Recommendation No. 21 (I) of the Faculty and further reference to the minutes of the Board of Studies in Political Science dated 16.9.1970.*

The following Lists of books/courses recommended by the Convener as authorised by the Faculty be approved (Vide Appendix III), and the Vice-Chancellor be *authorised* to approve syllabus for M.A. Prev./Final Group E, Paper V on 'Rural and Urban Politics'; Group G—Economics—All papers except papers (ii), (iv) and (vi) which are to be deleted; and Post M.A. Diploma in Indian Govt.

& Politics—all papers, when received from the Convener :—

- (a) List of Books for paper I (b) Political Concepts and Political Ideologies—B.A. (Pass) Final Year Examination of 1974.
  - (b) Books for M.A.—Papers VII & VIII (Public Administration in India.)
  - (c) Courses and Book for M.A. Papers in Group F—Sociology.
  - (d) Courses in Post—M.A. Diploma in International Affairs, 1972.
  - (e) Group H—Courses & Books for paper I (M.A.)
- (V) *Ref : Recommendation No. 21 (vii) of the Faculty & further reference to recommendation No. 2 dated 27/28.1.1971 of the Board of Studies in Hindi :*

- (a) The recommendation for prescribing the Novel “स्मृति चिन्ह” by Yagya Datt Sharma for Paper II of optional Hindi for the 2nd Year T.D.C. Arts examination of 1973 be *referred back* to the Board for re-consideration, as the same was not acceptable to the Council, and in the 1971 edition of the syllabus it may be mentioned that the name of the Novel to be prescribed will be announced later.
  - (b) The Board of Studies in Hindi be asked to consider prescribing—‘Adhunik Hindi Sahitya Ka Itihas’ instead of ‘Hindi Sahitya Ka Itihas’ for Paper I (poetry) of Optional Hindi for 3rd Year T.D.C. (Arts) Examination of 1974 and in the meanwhile it may be printed in the 1971 edition of the syllabus at the appropriate place that this was likely to be changed to ‘Adhunik Hindi Sahitya Ka Itihas.’
- (V) Principal S.C. Tela pointed out in the meeting that

the existing practice about the award of sessional marks for the post graduate examinations be continued to be followed, and the Council *approved* of the same.

Arising out of the Books recommended by the Faculty for the various courses of study, the Council *resolved that* in terms of Section 42 of the University Act, no book written by a member of the Board of Studies could be recommended or prescribed for any examination of the University and that even if a book was prescribed or recommended earlier when the author/co-author was not a member of the Board, the book could not be repeated when the author/co-author became a member of the Board of Studies, and accordingly, the books written by the members of the Board of Studies either independently or jointly with any other author, be omitted from the syllabuses of the various Faculties.

7. The Council considered the recommendations of the Faculty of Science made at its meeting held on the 8th February, 1971.

*Resolved to recommend* that the recommendations of the Faculty be approved with the following modifications/observations :

(I) *Ref : Recommendation No. (3)*

The Financial implications of the proposal be worked out and placed before the Syndicate for consideration.

(II) *Ref : Recommendation No. (12)*

(a) Recommendation No. 7 (iii) of the Board of Studies in Statistics be agreed to in principle and recommendation No. 7 (v) be noted.

(b) As regards recommendation No. 7 (iv) of the Board the Head of the University Department of Statistics be advised to include the same in



the Budget proposals of the Department for the next financial year.

(III) *Ref : Recommendation No. (17) :*

The amendment proposed to O.227 of the University Hand Book Pt.II be *not* accepted and status-quo be maintained in view of Resolution No. 5 of the Council passed at its last meeting held on 13/15th Feb., 1971 appointing a Committee to review the existing B.Sc. (Hons). Scheme.

(IV) *Ref : Recommendation No. 19 of the Faculty and further reference to recommendation No. 2 dated 30/31.12.70 of the Faculty of Education :*

On a persual of the recommendations of the Faculty it appeared that the Ordinances, Regulations and courses of study for the B.Sc. (Pass) B.Ed. and B.Sc. (Hons.) B.Ed. degrees were just the same with the only difference that the candidates securing 50% or more marks in the Honours subject would be awarded the Honours Degree and those securing less than 50% or in the Honours Subject would be awarded Pass Degree. The Council, therefore, *authorised the Vice-Chancellor* to seek clarification from the Principal, Regional College of Education, Ajmer and if it was clarified that additional courses of study were to be offered by a candidate for B.Sc. (Hons.) B.Ed. degree, the Ordinances, Regulations and syllabus for both the B.Sc. (Pass) B.Ed. and B.Sc. (Hons.) B.Ed. degree be accepted after incorporating the clarification by necessary amendments. In case it was found that the Faculty had recommended one and the same courses of study for the pass and Honours degrees, the revised Ordinances, Regulations and syllabus be accepted only for the B.Sc. (Pass) B.Ed. degree with necessary modifications.

(V) *Ref : Recommendations No. 21 (III)*

The recommendations of the Committee appointed by the Faculty for suggesting Rules for holding viva-voce examination in Mathematics for M.A. M.Sc. Final examinations (*Vide Appendix IV*) be accepted, *except* that the recommendation of the Committee for providing at least one period per paper per week for preparing students for the Viva-voce examination be *not* accepted.

8. The Council considered the recommendations of the Faculty of Engineering & Technology made at its meeting held on the 25th and 31st March, 1971.

*Resolved to recommend* that the recommendations of the Faculty be approved with the following modifications/observations :

- (I) Ref : Recommendation No. 2 (II) of the Faculty & Further reference to recommendation No. 5 (a) & (b) of the B.O.S. in Engineering dt. 18-11.1970.

On a clarification given by the Dean of the Faculty in the meeting to the effect that the proposal for allowing facility of supplementary examination to failures of Practical and Sessionals also was related to the scheme of 'Part Examinations' which had not yet been finalised by the Faculty, consideration of the same was dropped.

- (II) Ref : Recommendation No. 2 (II) of the Faculty and further reference to recommendation No. 5 (c) dt. 18.11.1970 of the B.O.S. in Engineering :

Pending decisions on the recommendations of the Examination Reforms Committee, status-quo be maintained.

- (III) Ref : Recommendation No. 2 of the Faculty and

further reference to recommendation No. 12 (a) dt. 18.11.1970 of the Board :

The recommendation be accepted in principle and the Faculty be asked to suggest necessary amendments to the existing Statutes/Ordinances/Regulations and Syllabus.

(IV) Ref : Recommendations No. 5 (II) & (III) of the Faculty and further reference to recommendations No. 3,4,5,6 & 7 dt. 3.3.1971 of the Board :

See Resolution No. 10 of these minutes,

(V) Ref : Recommendation No. 6 (a) :

The system of moderation be continued, but the proposal for payment of remuneration to members of the Board of Moderation be not accepted.

(VI) Ref : Recommendation No. 6 (b) & (c) :

These be referred to the Syndicate for consideration.

(VII) Ref : Recommendation No. (7)

The Provisions of the relevant Ordinance No. 136 regarding the awards of Ph.D. degree be continued to be followed.

9. The Council considered the recommendations of the Faculty of Sanskrit Studies made at its meeting held on 9th April, 1971.

*Resolved to recommend* that the recommendations of the Faculty be approved with the following modifications/observations :

(I) Ref : Recommendation No. (5) :

(a) Clause (B) of the proposed O.65-IX be reworded as follows :

(B) *For Lectures of Acharya classes :*

A first class Acharya Degree in the subject or a second class Acharya degree in the subject with 3 years experience of teaching Shastri classes, provided that for teaching subject of Literary and Cultural History of Ancient India and comparative Philolog the basic qualification shall be at least a second class Master's degree in Sanskrit.

(b) Substitute '10 years' for '15 years' in clause (1) of the proposed O.65—XI—J in regard to the minimum qualifications for Principals of Acharya Colleges.

(c) The following note be given below the proposed Ordinances Nos. 65—IX and 65 XI—J :

'In the case of persons who do not possess the minimum qualifications cited above and were either on probation or confirmed before the revised Ordinance came into force, the State Government/Management may move the University for exemption from the above minimum qualifications.'

(II) *Ref : Recommendation No. 7* and further reference to Appendix G to the minutes of the Faculty :

(a) Para No. 3 regarding amendement in O.193 be read as under :

"In the first para of O.193 substitute' (c) in the compulsory subjects of Samanya Sanskrit or Samanya Hindi (in the case of Hindi speaking students) or any one of the Optional subjects under Group II or III of O.329M-11 at the First Year/Second Year/Final Year Shastri Examinations' for '(c) the Shastri Examinations.'

- (b) In the proposed O.329M-15, add 'per subject' after Rs. 20/- occurring in para 2 so that the examination fee will be Rs. 20/- per Subject.
- (c) Practical Test should be separate as in the Faculty of Science instead of making it a part of a theory paper, and consequently R. 43-C be re-written as given *Vide Appendix V*.
- (d) In the proposed Rs. 43-C (1), substitute '60%', for '55%' in para 3 so that a candidate offering dissertation in lieu of a paper shall be required to have obtained at least 60% marks in the aggregate of the Acharya Part I Examination.

(III) *Ref : Recommendation No. 7 (J) of the Faculty & further reference to recommendations Nos. 3, 4 & 6 of the B.O.S. in Sanskrit Studies dt 8.4.71.*

- (a) The Dean, Faculty of Sanskrit Studies be requested to arrange for Hindi translation of the Ordinances and Regulations relating to the Shastri and Acharya Examinations, in collaboration with Prof. Saranam Singh and Principal Govind Narain, and the same be circulated to the Principals of the colleges concerned, provided that for all legal purposes the English version of the Ordinances/Regulations shall be treated authentic.
- (b) The question of translation of the Univ. Hand Book Pt. II into Hindi be deferred for the present.
- (c) In the opinion of the Council under the frame work of the University Act it was not possible for the University to prevent institutions from seeking affiliation from other Universities and functioning in the jurisdiction of the University.

10. With reference to—(a) Resolutions Nos. 5, 11 and 14 dated 10.2.1971 of the Faculty of Arts and (b) Resolution Nos. 5 (II) and (III) dated 25th 31st March, 1971 of the Faculty of Engineering & Technology recommending introduction of new Diploma Courses, the Council resolved that (i) the aforesaid recommendations be referred to the 'Priorities Committee' appointed vide Academic Council Resolution No. 3 dated 13/15th Feb., 1971 and (ii) if the Priorities committee agreed with the aforesaid recommendations of the Faculties regarding introduction of new Diploma Courses, the same be taken as endorsed by the Council and, therefore, be approved by the Syndicate.

11. With reference to its Resolution No. 35 dated the 13th/15th February, 1971 the Council considered the recommendation of the Faculty of Medicine & Pharmaceutics made at its emergency meeting held on the 25th Feb., 1971 in not accepting the suggestion of Dr. L.M. Sanghvi to the effect that the condition of necessarily possessing a recognised medical qualification in respect of Director or Head of the Department of non-clinical subjects be removed from O.65 so as to make the non-medical persons eligible for appointment to the post of Director/Head of the non-clinical department.

*Resolved that* the aforesaid matter be referred to the Medical Council of India with the observation that in the opinion of the Academic Council a Professor in a non-clinical subject be treated as eligible for appointment as Head of the Department in that subject.

12. The Council considered the recommendations of the Committee of courses in General Education made at its meeting held on the 18th January, 1971 (*vide Appendix VI*).

*Resolved to recommend that* the recommendations of the Committee be accepted with the modification that in recommendation No. 1 (I) and 1 (II) the words—'5 years' be substituted for '3 years' so as to be in conformity with the provisions of S.25 (1) of the Univ. Hand Book Pt. II.

13. With reference to its Resolution No. 24 dated the 28th October, 1970 read with the Syndicate Resolution No. 31 dated 7.11.1970 and No. 34 dated 14.12.70 instituting two more University Gold Medals for the M.Com. Examination so as to provide one medal each for the the three Departments of Commerce and a University Gold Medal for the M.B.A. Examination, the Council resolved to recommend that the following consequential amendments be made to the relevant O.122 A (b) of the Univ. Hand Book Pt. II :

(i) In clause 6 against M.Com. add with in brackets—  
'one medal each for the three Departments of Commerce.'

(ii) Add 'M.B.A.' below 'M.Com.'

*Resolved to recommend further* that whenever a new Post-graduate Course is introduced provision for a Gold Medal be invariably made.

14. The Council considered the following proposal of Prof. Ziauddin Khan, Head of the University Department of Public Administration as contained in his letter No. C-470-71/273 dated the 4th November, 1970 together with the views of the Dean, Faculty of Arts as contained in his letter No. 307 dated 13.2.1971 to the effect that the proposal might be considered in the light of the more general situation which existed today when disciplines were rapidly ramifying and overlapping :

'In view of the recent growth of Public Administration as an academic discipline in India and the Paucity of candidates with the prescribed minimum of Second Class M.A. in Public Administration, and also keeping in view the prevalent practice in other universities for appointment of Professors/Readers in the subject, the following note be added to the present qualifications for Professors/Readers as prescribed under O.141-B of the Univ. Hand Book Pt. II :

Note : In the case of Professor/Reader in Public

Administration, in essential qualification the candidate may have at least a second class degree of M.A. in Public Administration or in allied subjects."

*Resolved that the aforesaid suggestion be referred to the Committee appointed by the Academic Council for rationalising the qualifications for the various teaching posts.*

15. The Council considered the following office proposals.

(i) The following sub-para (a) be deleted from O.192-I and the rest paras be re-numbered :

(a) No candidate shall be admitted to an examination of the University unless he has attained the minimum age prescribed for admission to that examination for regular students as per O.81—A."

(ii) In O.194 the words—"First Year or Second Year of LL.B. (A) or First Year, Second Year or Third Year of LL.B. (P)" be inserted between the words—"in the rest at the" and "Main examination."

(iii) In O.196 the words—"the supplementary examination" be substituted for the words—"an examination" in the first sentence so as to make the Ordinance explicitly clear.

*Resolved to recommend that amendment to Ordinances as proposed above be accepted.*

16. With reference to the Academic Council Resolution No. 11 dated 21st April, 1970 desiring that the question be examined whether it was necessary to lay down the constitution, powers and functions etc. of the Research Board in Statutes instead of Ordinances (as at present) in the light of the provisions contained in Section 24-K(1) and Section 27(4) of the University Act, the Registrar reported that the University Legal Adviser had given the following advice on the above points :



'Section 24-K(1) of the University Act deals with the establishment of the Research Board, the Publication Board, Board of Sports, Health and Residence Board and such other Boards as may be prescribed by the Statutes.

Attention is further invited to Section 27(4) which provides for 'Constitution, powers and functions of the authorities, Boards and Committees of the University, save as provided in this Act.'

Thus it would be clear that the Constitution, powers and functions of the authorities, Boards and Committees of the University shall be laid down by the Statutes. At present Ordinances Nos. 332, 335 and 341 deal with the constitution of these various Boards which can be challenged at any time.

It would, therefore, be in the fitness of things if the Constitution, powers and functions of these Boards are laid down in the Statutes. New Statutes may be framed in that connection to avoid any legal complications arising in future. The present Ordinances can be challenged as ultra-vires of the provision of the University Act referred to above. Therefore, steps should be taken as early as possible to remove these defects.'

In this connection it was further reported to the Council that if the above legal advice was accepted it would also apply to (i) Publication Board, (ii) Board of Sports, (iii) Equivalence Committee, (iv) Committee of Course in Home Science and (v) Committee of Courses in Modern European Languages.

*Resolved that the matter be referred to a Committee consisting of the following members :*

1. Prof. G.S. Sharma (Convener)
2. Prof. G.C. Pande
3. Prof. P.S. Sundaram

4. Shri C.M. Mathur, Univ. Legal Adviser.

17. The Council considered a proposal of the Principal, Regional College of Education, Ajmer as contained in his letter No. F. 9-35/68-69/Recognition, 24452 dated 15.2.1971 duly forwarded by the Dean, Faculty of Education to the effect that in O.327 the words—'or one year B.Ed. Languages (English/Hindi) or two years B.Ed. (Craft) Course Examinations' be inserted between the words—'B-Ed. Science/Commerce/Agriculture/Home Science' and 'or Four-Year B. Tech. Ed. Examination.'

*Resolved to recommend* that the above proposal be accepted.

18. With reference to its Resolutions No. 24(I) B and 24 (II) dated the 13th/15th February, 1971 the Council considered the following recommendations of the Faculty of Ayurveda as clarified by the Dean vide his letter dated the 10th March, 1971 and also personally explained to the office :

(i) O.329 N-3 be re-written so as to read as follows :—

O.329 N. 3 : A candidate who after passing the Upadhyaya Examination with English of the Board of Secondary Education, Rajasthan or the Pre-University Examination with Sanskrit as an optional subject of the University or an examination recognised by the University as equivalent thereto with Sanskrit as an optional subject, has attended a regular course of study in an affiliated Ayurvedic College for one academic year shall be eligible for admission to the Pre-Ayurvedic examination.

(ii) In O.329 N 4, substitute '16 years' for '15 years'.

(iii) O.329 N-11(a) be re-written so as to read as follows :—

O.329 N-11(a); A candidate who after passing the Pre-Ayurvedic examination of the University has

attended a regular course of study in an affiliated Ayurvedic college for one and a half academic year shall be eligible for admission to the First Ayurvedacharya examination.

- (iv) In R. 43-D (printed on page 1 of the 1970 edition of the syllabus), substitute the following note for the existing one :—

N.B. प्रवेशिका के प्रश्न पत्र में 6 प्रश्न होंगे और उनमें एक विकल्प होगा ।

- (v) In R. 43-G (Printed on page 2 of the 1970 edition of the syllabus) the note 'Each written paper will consist of six questions out of which five will be required to be attempted' should be printed right against 'R-43-G' and the heading 'First Ayurvedacharya Examination' should be printed after the aforesaid note so that the note will apply to all the three examinations of the Ayurvedacharya Course.
- (vi) In the course for Sanskrit paper II for the Pre-Ayurveda Examination (Printed on page 10 of the 1970 edition of the Syllabus), substitute" लघुसिद्धान्त कोमुदि । आलोच्य ग्रन्थ अनुवाद चंद्रिका (चक्रवर) for परम लघुसिद्धान्त कोमुदि
- (vii) The following recommendations of the Board of Studies in Ayurveda as contained in lines 9 to 16 on page 3 of the minutes of its meeting held on 15th and 16th September, 1970 be accepted :—

एडिसन 1967 की नियमावली में पृष्ठ सं० 68 पर नीचे विज्ञान व काय चिकित्सा के पाठ्य ग्रन्थों में (1) भैषज्यरत्नावली (2) चरक सुश्रुत वारभट्ट के उपयोगी अंश इन सत्र में होने वाली परीक्षाओं को पाठ्य विषय माना जाय और इनकी सूचना संबंधित

नहाविद्यालयों को जोड़ा भेज दी जाय । पृष्ठ सं० 44 ट में खरलीय रसायनों में वसन्त मालती वसन्त कुमुमाकर को 'नवायस', के आगे और 'आदि' से पहिले जोडा जाये । पृष्ठ संख्या 57 पर कौमार भृत्य के 30 नम्बर अंकित किये जायें और इसी सत्र से लागू किया जाये ।

It was further clarified by the Dean in the meeting that pages Nos. 44 ( ' ) and 57 as referred to in (vii) above are of the 1970 edition of the syllabus.

*Resolved to recommend* that the aforesaid recommendations of the faculty as clarified by the Dean, together with the amendments in the relevant Ordinances be approved.

19. The Council considered a suggestion of the U.G.C. Advisory Committee of Vice-Chancellors as contained in the U.G.C.'s letter No. F. 1-38/68(CD) dated the 11th March, 1971 to the effect that time limit (number of years) should be specified for which a 'full time student' could be permitted to pursue a particular course of study.

In this connection the Council noted that in the case of professional examinations like B.E., M.B., B.S. and Ayurveda provisions already existed in the relevant Ordinances limiting chances for appearing at the examinations, and for other course of study, 'Rules of admissions' generally notified by the various institutions provided that failures of two years and those failing in all the subjects would not be admitted-

*Resolved that* the existing Rules be continued to be followed.

20. The Council considered a proposal of the Pricipal, Regional College of Education, Ajmer as contained in his letter No. F. 9-200, 70, 23987 dated the 11th February, 1971 for instituting a four-year course in Arts (Languages and Social Sciences) leading to B.A. (Pass) degree after a study of 3 years and B.A. (Pass.Hons.) and B.Ed. Degree after a study of 4 years.

*Resolved that* the aforesaid proposal be *referred* to the 'Priorities Committee' appointed by the Academic Council vide its Resolution No. 3 dated 13/15th February, 1971.

21. With reference to (i) Academic Council Res. No. 4 dated 28.10.1970 accepting in principle a proposal of the National Council for Educational Research and Training for starting a vacation-cum-correspondence course leading to the B.Sc. degree for teachers working in the Secondary Schools and referring the matter to the Faculty of Science for considering further details and (ii) Faculty of Science Res. No. 9 dated 8.2.1971 appointing a Committee under the Chairmanship of the Dean of the Faculty to recommend necessary addition and alternations to the Ordinances & Regulations, and authorising him to place the report of the Committee directly before the Academic Council, the Council considered the recommendations Nos. 1 and 2 of the said Committee made at its meeting held on 16th March, 1971 (*Vide Appendix VII*).

In this connection the Council also considered making the following additions/alterations to the relevant Ordinances:

(1) In Chapter XXX, the existing heading 'K-Correspondence Courses' be re-worded as 'K-Correspondence Courses for B.A./B.Com. (Pass Course).'

(2) In Chapter XXX, add the following new heading after O.199D-6 :

'L-Vacation-Cum-Correspondence Course for B.Sc (Pass Course).'

(3) Introduce the following new Ordinances :—

O.199-D-7. A candidate may obtain B.Sc. (Pass) degree of the University after successful completion of the vacation-cum-correspondence course provided by the Regional College of Education, Ajmer.

O.199D-8 : A candidate for B.Sc. vacation-cum correspondence course shall be required to be

admitted in the Regional College of Education, Ajmer. Only those Science teachers who have at least 5 years experience of School teaching and are recommended by the Director of Education/Director of Public Instruction of the State concerned will be admitted to this course.

*O.199 D-9* : The duration of the courses of study, the syllabi and the scheme of examination for the B.Sc. Vacation-cum-Correspondence course shall be the same as for the B.Sc. (Pass Course) of the University.

*O.199-D-10* : All Statutes, Ordinances, Regulations and Rules governing matters with regard to enrolment and eligibility of students, admissions discipline, scholarships, medals and prizes, and examinations as applicable to the regular students of an affiliated college shall, unless specified otherwise, apply to the students seeking admission to the Regional College of Education, Ajmer for the B.Sc. Vacation-cum-Correspondence Course.

*O.199-11* : The Regional College of Education, Ajmer shall hold classes for teaching and practical work during the summer vacation from 16th April to 30th June and during Deshera-Deewali break for a period of 10 days on the dates to be announced by the Principal. At least 8 periods, each of 45 minutes duration, will be provided on each working day so that the total number of periods per academic session shall be not less than 560. Instruction by correspondence shall be provided during the rest of the session.

*O.192 D-12* : A candidate for the B.Sc. vacation-cum-Correspondence Course shall be required to attend at least 80% of the periods for theory/practical work failing which he will not

be allowed to appear at the examination. The Principal of the Regional College of Education, Ajmer shall send to the University a list of such candidates as fail to comply with the above requirements at least 21 days before the date the commencement of the examination."

*Resolved to recommend* that the recommendations of the Committee together with the amendments in the Ordinances cited above, be approved.

22. With reference to its Res. No. 45 dated the 13/15th February, 1971 confirming the orders of the Vice-Chancellor suspending the operation of O.199D-6 relating to the submission of 50% Response Sheets by the students of B.Com. Correspondence Course for the examination of 1971, the Council considered letter No. 4425 dated the 15th April, 1971 from the Director, University Institute of Correspondence Studies proposing that the said Ordinance be continued to be in-operative for the time being in view of very poor response.

*Resolved to recommend* that the Director of the Institute be informed that O.199 D-6 shall be operative from the Coming session and that the situation could be reviewed at a later stage.

23. The Council considered the following proposal of Prof. R.G. Sarien, University Department Business Administration as contained in his letters dated 17th October, 1970 and 6th April, 1971 :

1. Resolved that the entire question of re-examination of answer-books, after the declaration of University results introduced w.e.f. the examinations held in 1970 be re-considered by a Committee and its report submitted by the end of December, 1970 for the consideration of the Academic Council. Further it is proposed to recommend that the names for the purpose of re-examination be recommended in the usual manner and discrimination between

external and internal examiners regarding payment of remuneration existing at present, be removed immediately.

2. Resolved that whenever a post in the Senior scale falls vacant in a teaching department the senior most person in the immediately lower grade be asked to officiate for it and given in allowance of 20% of the minimum salary in the higher grade, for this purpose. Resolved further that this should be applicable to all those who are officiating in various capacities on the day of acceptance of this resolution and be applicable with retrospective effect from the dates on which individual were made to officiate.
3. Resolved that a Selection grade for Readers in the scale of 1100-1600 on the same conditions and terms and extent as in case of Professors' promotion to Senior grade be introduced forth-with. Resolved further this should apply to promotion of lecturers' to the selection grade in the pay scale of 700-1250, on the same conditions and simultaneously.
4. Resolved that the Academic Council should lay down a clear cut policy for the creation of senior posts in the various teaching departments of the University and that immediate steps are taken to remove the existing disparities between junior and senior posts in various teaching departments. It is further resolved that rationalisation of this is urgently required in the interest of maintaining teaching and research standards in the University and to check mounting frustration among teachers of certain departments where the ratio between junior and senior posts is very low.
5. Resolved that the post of a Case Analyst in the Lecturers' grade be created immediately in the department of Business Administration, mainly for the M.B.A. Programme.



6. Resolved that two posts of Lecturers in the department of Business Administration be up-graded and placed in the Readers grade with effect from the next academic session starting in July, 1971. Resolved further that new post in the Professors grade be created in the department of Business Administration, mainly for the purpose of developing and running of the M.B.A. Programme.
7. Resolved that a clear-cut and rational policy, which uniformly applies to all teaching departments in the University be developed by the Academic Council to avoid unnecessary interference by the Administration while advertising for various teaching posts. Resolved further that in no case a post should be advertised unless a copy of its advertisement has been approved by the Head of the Department concerned who alone is in a position to say what type of teaching personnel is needed so that the same may be mentioned under 'Desirable Qualifications.'
8. Resolved that a uniform organisational pattern of administration is introduced in all the faculties (Teaching Wings) of the University. Resolved further that in order to remove the existing discrimination the offices of Dean, Associate Dean etc. are immediately created in the Commerce Faculty which should be renamed as University Studies in Commerce—having its under-graduate and post-graduate wings on the same pattern as in case of the Arts and Science Faculties.
9. Resolved that employees of the University should not be asked to pay the fee of Rs. 4/- and made to apply on prescribed forms, for various senior posts in the teaching Wing. Further all those who wish to be considered for a senior post should automatically be considered for the same on the basis of

bio-data which they may be required to submit along with their request for the purpose.

10. Resolved that a system of promotion to Senior post within the organisation should be developed without further delay, for this alone will check the rapidly growing discontention and frustration among teachers of the University.
11. Resolved that invigilation work should be made compulsory for all categories of teachers in the teaching wing of the University. Resolved further that all Post-graduate examinations should be arranged in the Main Campus of the University where most of the post-graduate classes are held so as to relieve undue and increasing pressure on the undergraduate wings during the examination days.

*Resolved as follows :*

- (A) Considered of proposals Nos. 1, 7 and 8 was *dropped* as the mover was permitted to withdraw the same in the meeting.
- (B) Consideration of proposals Nos. 3, 4 and 10 be *postponed*.
- (C) Proposals Nos. 2 and 9 be *referred* to the Syndicate.
- (D) Proposals No. 6 be referred to the 'Priorities Committee' appointed vide Academic Council Res. No. 3 dated 13/15.2.1971
- (E) As the matter raised in proposal No. 11 was of administrative nature the Council observed that the same should be dealt with at the administrative level.
- (F) As regards Proposal No 5, creation of the post of a Case Analyst in the Lecturer's grade (to be treated as a teaching post) be agreed to in principle, and the following minimum qualifications for the post

be inserted in O.141-C of the University Hand Book Part II :

*“Case Analyst in the Department of Business Administration :*

Same qualifications as for a Lecturer for M.B.A. classes with specialisation/experience of case analysis.”

24. With reference to its Resolution No. 1 dated the 24th September, 1970 to the effect that in view of there being a number of unfilled seats in Post-graduate classes in various colleges affiliated to the University and a number of applicants having not been able to get admission, the condition regarding minimum percentage of marks to be obtained by a candidate for admission to the M.A., M.Sc. and M.Com. examinations as laid down in Ordinances Nos. 211, 234 and 248 be relaxed for the academic session 1970-71, the Council considered the policy for future admissions.

In this connection the Council also considered the question of continuance or otherwise of the University Evening College for Post-graduate instruction established on a purely temporary and adhoc basis for the session 1971-71 (viz., upto 31st March, 1971).

*Resolved to recommend* that (i) the condition of obtaining a minimum percentage of marks at the qualifying examination for the proposes of admission to M.A., M.Sc. and M.Com. courses as laid down in Ordinances Nos.211, 234 and 248 of the University Hand book Part II *be relaxed* for admissions to be made to the Previous class of the M.A./M.Sc./M.Com. in the affiliated colleges in the session 1971-72 also and (ii) the questions of continuance or otherwise of the University Evening College for Post-graduate Instruction be considered and decided by the new Vice-Chancellor when he comes.

25. With reference to its Res. No. 23 (vi) dated the 13th/15th February, 1971 the Council again *postponed* consi-

deration of recommendation No. 6 dated 30/31st December, 1970 of the Faculty of Education.

26. The Council considered the recommendations of the Equivalence Committee made at its meeting held on the 6th April, 1971. (*Vide Appendix VIII*)

Resolved to recommend that the recommendations of the Committee be approved.

27. With reference to its Res. No. 23 dated the 13/15th February, 1971 approving inter-alia recommendation No. 2 (IX) (c) dated the 30/31st Dec., 1970 of the Faculty of Education to the effect that a candidate for the B.Ed. examination be required to answer two questions instead of one from Section 'B' of papers IV and V, the Council considered a suggestion of Shri V.V. Vajpayee and Shri B.G. Tewari (Members of the Faculty) duly endorsed by the Dean that the allotment of marks for Second A and B be consequently changed from 60 and 15 to 50 and 25 respectively and Note No. 2 to Rs. 42 be amended accordingly.

Resolved to recommend that the aforesaid suggestion be accepted and Note No. 2 to R. 42 be amended accordingly.

28. With reference to its Res. No. 23 dated the 21st April, 1970 the Council considered the recommendations dated 18.9.1970 and 17.3.1971 of the Committee appointed by it to examine the list of Hindi equivalents of the English names of the University Degrees and Diplomas as suggested by the Commission for Scientific and Technical Terminology (*Vide Appendix IX*).

Resolved to recommend that the recommendations of the Committee be approved.

29. The Council considered the recommendations of the Research Board made at its meeting held on the 19th April, 1971 (*Vide Appendix X*)

*Resolved to recommend* that the recommendations of the Research Board be approved with the following modifications :

- (A) In para (i) of the proposed O.125 (b) the words—“an order higher than that of a Ph. D. degree” be substituted for the words—“sufficiently high order which could be regarded as equivalent to Ph.D. research, to his/her credit.”
- (B) In para (ii) of the same Ordinance put ‘full stop’ after the words—‘high order’ and delete the words—‘which could be regarded as equivalent to Ph D. research, to his/her credit’.

30. The Council considered letter No. Aca/13014-130 dated the 16th March, 1971 from the Secretary Board of Secondary Education, Rajasthan enquiring whether it will present any difficulties in the admission of such students to the higher courses of study in the University or its affiliated colleges as are allowed to appear at the examinations of the Board in parts as per recommendation *given below*, made by the Eighth Conference of Chairman and Secretaries of the Boards of Secondary Education in India organised by the National Institute of Education, New Delhi :

- (a) The Conference apprehends that the procedure recommended by the Education Commission regarding the issue of certificates in those subjects in which a candidate passes may results in the deterioration of standards. It is, therefore, recommended that the Boards may make meaningful sub-groups of different subjects and incorporate a system of issuing partwise certificates in those cases where the students do not pass in all the subjects according to the rules of the Board concerned. This scheme may be introduced only in Secondary School examinations held at the end of classes X and XI. Instead of subject-wise passing and certification this scheme would allow partwise passing. The rules regarding exemption may, however, operate as stated above in the case of individual subjects within sub-groups.

- (b) The cut off score accepted by some Boards for determining pass and fail and the score for granting exemption to repeaters in a given subject should be the same. This is not so in some cases and the minimum score for granting exemption is generally much higher than that for passing in the subject. The Conference strongly recommends that this disparity may be removed forth with.

*Resolved that* the matter be referred to a Committee consisting of the following members with power to coopt more persons, if necessary :

1. Dean, Faculty of Arts (Convener)
2. Dean, Faculty of Science
3. Dean, Faculty of Commerce
4. Prof. Daya Krishna
5. Shri K.L. Bordia

31. The Council *recommended* panels of experts (with the area of specialisation noted against each name) to serve on the Selection Committees to be constituted for appointment of teachers of various subjects in the University to be held during the academic year 1971-72, in terms of Statute 20 of the University Hand book Part II.

32. The Council considered the following proposal of Vaidya Mohan Lal Bhargava, Dean, Faculty of Ayurveda and Principal, Government Ayurveda College, Jaipur as received vide his letter No. 9 dated 16.4.1971 :

“In view of the fact that the Department of Kaya-chikitsa of the Government Ayurvedic College, Jaipur is fully equipped in every respect and has all medical facilities including a hospital provided with 165 beds for indoor patients and visited by 1000 out door patients every day and further in view of the fact that a large number of graduates including some of very high merit are every year deprived of the opportunity of offering post-graduate courses in Kayachikitsa, the University should

take steps to give the college a provisional sanction for starting post-graduate classes in Kayachikitsa in July, 1971."

In this connection it was reported to the Council that the Council vide its Res. No. 24 (v) dt. 13/15.2.1971 had deferred consideration of the recommendation regarding institution of Post-graduate courses in the Faculty of Ayurveda till permanent affiliation was secured by an affiliated college for the Ayurvedachary examination and, therefore, there were no Statutes/Ordinances etc. for the purpose at present.

*Resolved that* consideration of the proposal be *dropped* in view of the above report made to the Council.

33. The Council *postponed* consideration of the following proposal of Dr. G.C. Pande, Dean, Faculty of Arts and Head of the University Department of History & Indian Culture as contained in his letter dated 7th April, 1971, and *desired* that in the meanwhile the reaction of the State Government to the earlier resolution No. 30 dated 13/15th Feb., 1971 of the Council be obtained :

"In view of the over blown size of the University and the recent decision of the Academic Council and the Syndicate on the subject, a moratorium should be placed on the further affiliation or alternative steps should be initiated to bifurcate the University or open another one to take care of further affiliation."

34. With reference to its Resolution No. 48 dated 13/15th Feb., 1971 the Council considered the recommendations of the Committee appointed by it under the chairmanship of Prof. R.C. Mehrotra (*vide Appendix XI*).

*Resolved to recommend* that the recommendations of the Committee be approved with the observation of the Council that if the designation 'Director' is accepted for the senior most member of the University Institute of Correspondence Studies, then the posts of Readers and Lecturers of the Insti-

tute would have to be designated as 'Dy. Directors' and 'Assistant Directors' respectively.

35.      The Academic Council *resolved* to place on record its deep sense of appreciation of the valuable services rendered by Prof. P.L. Bhatnagar to the University during his term as Vice-Chancellor.

The Vice-Chancellor had left at about 5.30 p.m. after requesting Prof. R.C. Mehrotra to take the Chair.

The meeting ended at about 6.30 p.m.

Sd/-

P L. Bhatnagar  
*Vice-Chancellor*

Sd/-

L.P. Vaish  
*Offg. Registrar*



## APPENDIX I

{Ref:- Reso. No. 5 iv of Academic Council dated 23rd April 71}

## NAMES OF BOOKS IN VARIOUS SUBJECTS

1st Year T. D. C.

*INDUSTRIAL PSYCHOLOGY :*

1. Nature and significance of Industrial Psychology;
2. Scientific and social basis of Industrial Psychology;
3. Leadership pattern and Industrial organisations;
4. Motivation and Morale;
5. Selection, Recruitment and Placement;
6. Work and working conditions;
7. Labour turnover and Absenteesm;
8. Job Satisfaction;
9. Fatigue and Monotory;
10. Methods of wage payments and Incentive scheme.

*Books*

Harrel, Industrial Psychology; बार. सी. सक्सेना—श्रम समस्यायें एवं  
समाज कल्याण

Maier, Psychology in Industry;

Brown, A.C. Industrial Psychology;

Tiffin, Industrial Psychology.

*INDUSTRIAL SOCIOLOGY*

1. Sociology—Its subject-matter, scope and usefulness.
2. (a) Society and Industrialization. The process of industrialization and its social conditions and consequences.  
(b) Social aspects of Economic Growth. The Social context of consumption, saving and investment.
3. Industrialization and Society in India. Development of Business Communities. Social Composition of Labour Force in India.
4. Formal and informal aspects of industrial organization.  
Mayo and the Hawthorne studies.  
Authority and leadership in industry.

*Books recommended :*

1. Kerr, Clerk et. al. Industrialization and Industrial Man, Harvard University Press, Cambridge, Mass. 1960, Part I.
2. Hoselitz, B. F. : and Moore, W. E., Industrialization and Society, UNESCO, Mouton, 1963, Part III.
3. Gadgil, D. R., The Industrial Evolution of India, Oxford University Press, Bombay, 1954.
4. Lambert R. D., Workers, Factories and Social Change in India, Princeton University Press, Princeton, N. Y., 1963.
5. Burus, Tom. The Sociology of Industry. In Welford et. all (ed.) Society, Problems and Methods of Study, Routeledge and Kegan Paul, London, 1963.

IIInd Year T. D. C.

*LABOUR LEGISLATION : Books Recommended.*

- P. C. Sarkar—Labour Laws in India; Sarkar & Sons Calcutta (Latest Edition).
- Om Prakash Agrawala—The Industrial & Labour Law Digest : Metropolitan Book Co. (Pvt.) Ltd., Delhi.
- R. C. Saxena—श्रम समस्यायें एवं समाज कल्याण ।

IIIrd Year T. D. C.

*INDUSTRIAL RELATIONS*

- Yoder—Heneman & Others—Hand Book of Personnel Management & Labour Relations; McGraw-Hill Book Company.
- Agnihotri—Industrial Relations in India.
- C. Myres—Industrial Relations in India.
- R. C. Saxena—श्रम समस्यायें एवं समाज कल्याण ।
- I. I. P. M.—Personnel Management in India.

*COMPANY LAW & SECRETARIAL PRACTICE :*

- S.A. Sharlekar—Secretarial Practice (Kitab Mahal, Allahabad).
- Bahal J. C.—Secretarial Practice.

Shah S. M. Shukla—कम्पनी अधिनियम एवं सचिवीय पद्धति, साहित्य भवन आगरा,

Dr. D. C. Jain—कम्पनी अधिनियम एवं सचिवीय कार्य, साहित्य भवन आगरा,

K. Kishore—Company Law & Secretarial Practice (Asia Publishing House)

### COMMUNICATION AND SALESMANSHIP

आर० बी० उपाध्याय—व्यावसायिक संचार

शिवध्यान सिंह चौहान—व्यावसायिक संदेशवाहन,

Earl & Buckly—How to write Better Business Letters.

कोठारी, नुवाल, शर्मा—व्यावसायिक संचार के मूल तत्व

Rustm R. Davar—Salesmanship & Publicity.

Hassa & Earnest—Creative Salesmanship—Glincol Press.

Allen E. Zimmer—The strategy of Successfull Salesmanship.

John M. Rathmell—Salesmanship—Selected readings.

Thompson : — SalesManship, — Concepts, Management & Strategies.

(1) List of books recommended for the paper of Indian Economic Administration prescribed for the I Year T.D.C. Examination.

1. M.P. Sharma, Government of Indain Republic
2. जियाउद्दीन खां, गन्तरसिंह, लोक प्रशासन, रमेश बुक डिपो, जयपुर ।
3. एस० सी० मेहता : लोक प्रशासन, जयपुर ।
4. R. N. Bhargava : Indian Public Finance.
5. Planning Commission : Planning Machinery in India.
6. Reports of the Administrative Reforms Commission.
7. Ashok Chanda : Indian Administration.

(2) List of books recommended for paper I—'Planning & Economic Development' prescribed for the III Year, T.D.C. Examination.

1. Alok Gosh : Indian Economy world Press.
2. V.K.R.V. Rao : A Decade of Economic Development and Planning in India.
3. पी० सी० जैन : भारतीय अर्थशास्त्र की समस्याएं चैतन्य पब्लिशिंग हाउस, इलाहबाद ।

4. डा०हरिशचन्द्र शर्मा व डा०आर०एन० सिंह : भारत का आर्थिक विकास, साहित्य भवन, आगरा ।
5. Maurice Dobb : Soviet Economic Development Science 1917.
6. Alec Nove : Soviet Economy.
7. Bornstein & Fusfeld : Soviet Economy—A book of Reading.
8. H. C. Saxena सोवियत रूस का आर्थिक विकास, रमेश बुक डिपो, जयपुर ।
9. R N. Singh, J.P.Srivastava and S.M Ghaudhary : सोवियत रूस का आर्थिक विकास, प्रकाश पब्लिशर्स, फिल्म कालोनी, जयपुर ।
10. W.A. Lewis : Principles of Economic Planning.
11. Waterdson : Economic Planning.
12. C. Allon : A short Economic History of Modern Japan.
13. J. B. Cohen : Japan's Post War Economy.
14. Statistical Surveys of Japan.
15. Sakai—Tsunoyama : A conciso Economic History of Modern Japan..
16. Government of India, Third and Fourth Five Year Plans.
17. Plan Progress Reports.
18. IX Five Year Plan of the U.S.S.R. (1971-75)

## APPENDIX II

(Ref:- Reso. No. 5 (V of Academic Council  
dated 23rd April 71)

O.241 in respect of the B. Com. Pass Course be re-written so as to read as follows :

O.241 (1) The subjects for the examination shall be as follows :

*Compulsory subjects* : (For First Year examination only).

1. General English
2. General Hindi
3. Any one of the following :
  - ( i ) Mathematics
  - (ii ) Industrial Psychology
  - (iii) Industrial Sociology
  - (iv) Indian Economic Administration
  - ( v ) History of Indian Civilisation and Culture.
  - (vi) Book-keeping—only for those who did not offer Commerce at the qualifying examination.

*Core Subjects* :

1. Accountancy & Business Statistics.
2. Economic Administration & Financial Management.
3. Business Administration.

*Optional Subjects* : (Any one of the following)

1. Costing & Quantitative Methods.
2. Labour and Industrial Relations.
3. Banking and Co-operation
4. Steno-typing.

(2) A candidate failing in any one or even all the compulsory subjects as mentioned above at the First Year Examination will be allowed to continue his studies in the Second Year class, provided he passes in all the remaining subjects in

the First Year examination. Such a candidate will have to clear the compulsory subjects in which he failed at the First Year examination in the immediately following three (Main or supplementary) examination and will be allowed to join the Final Year class only after he had cleared all the compulsory subjects. If a candidate passes the Second Year Examination but again fails to clear the compulsory subject(s) his result of Second Year will be with-held and released only after he has passed in all the compulsory subjects. Such a candidate shall be allowed two further chances to clear the failing compulsory subject(s) at the immediately following Main and Supplementary examinations and allowed admission to the Final Year T.D.C. class, provided that if he fails to clear them even in these two chances (inability to avail a chance shall be treated as failure), his First Year and Second Year T.D.C. Examinations shall stand cancelled.

(3) A candidate passing in any one or all the compulsory subjects shall not be required to re-appear in the same papers even if he has failed at the examination. Such a candidate may, however, at his option reappear at the First Year T.D.C. Examination as a whole, subject to the condition that his earlier performance in the aforesaid compulsory papers shall be treated as cancelled.

O.193 : In the first line of the Ordinance, read—'one optional/core subject' instead of 'one optional subject.'

O.165 : Clause (i) of the Ordinance be re-written so as to read as under :

“(i) to offer the same subjects in which he has attended a regular course of study in an affiliated colleges of the University : provided that (a) a candidate for the First Year Examination of the B.A./B.Sc., may be allowed to change the compulsory subject of Gen. Education to History of Indian Civilisation & Culture and vice-versa, or one of the optional subjects last offered by him, (b) a candidate for the First Year examination of the B.Com. may be allowed to change the compulsory subject offered by him out of the subjects of (i) Mathematics, (ii) Industrial Psychology, (iii) Industrial Sociology (iv) Indian Economic Administration and (v) History of Indian Civilisation & Culture (c) a candidate for the Second Year examination of B. Com. may be allowed to change the optional subject last offered by him; and (d) a candidate for the previous examination for M.A./

M. Sc./M. Com. may be allowed to change one of the optional papers last offered by him, with the permission of the Vice-Chancellor, on the recommendation of the Principal of the college concerned. Such an application for change in the subject, duly recommended by the Principal of the College concerned, must reach the Registrar not later than the 31st July preceding the examination at which candidate wants to appear, the last date for receipt of such applications shall be 25th September in the case of candidates who fail at the Supplementary Examinations."

O.86-A :

- (I) In sub-clause (ii) of clause (1) of the Ordinance.
  - (a) Insert 'Core/' between the words-'in such' and 'optional subjects' in the first sentence.
  - (b) Delete proviso beginning with the words-'Provided that' and ending with the words-'qualifying examination.'
- (II) In clause (2) of the Ordinance substitute—'Core papers of Commerce' for 'compulsory papers of Commerce' occurring in the second paragraph.
- (III) Substitute—'(Financial Accounting)' for '(Elements of Statistics)' in sub-para (a) of clause (4) of the Ordinance.
- (IV) In clause (4) of the Ordinance *delete* 'of General Hindi, General English and General Education History of Indian Civilisation & Culture, wherever occurring in sub-para (a).
- (V) Clause (5) of the Ordinance be re-written so as to read as under :
 

"5 (i) Candidates who appeared at the First Year T. D. C. Examination of the University in the compulsory and/or Core/Optional subjects under the aforesaid provision shall not be promoted to the Final Year T. D. C. class until they have passed the First Year T.D C. examination in the required compulsory and/or Core/Optional subjects and (ii) the attendance of such candidates as passed in the required compulsory and/or Core/Optional subjects at the supplementary examination will be counted from the date of their admission but not later than a week from the date of declaration of the supplementary examination result."

R-18 :

## B. COM. (PASS) EXAMINATION

(Three Year Degree Course)

First Division 60%	{ of the aggregate marks obtained at (i) First Year Examination excluding those obtained in the compulsory subjects, (ii) Second Year Examination and (iii) Final Year Examination taken together
Second Division 48%	

All the rest in Third Division, if they obtain the minimum pass marks viz., 36%. No division shall be awarded on the result of the First Year and the Second Year Examinations.

## FIRST YEAR T. D. C. EXAMINATION

Each subject will have one paper of 3 hours duration and carry 100 marks, the minimum pass marks in each subject being 36.

### COMPULSORY SUBJECTS :

1. General English
2. General Hindi.
3. Any one of the following :
  - ( i ) Mathematics,
  - (ii ) Industrial Psychology
  - (iii) Industrial Sociology
  - (iv) Indian Economic Administration
  - ( v ) History of Indian Civilisation & Culture
  - (vi) Book-keeping-only for those who did not offer Commerce at the qualifying examination.

### CORE SUBJECTS :

1. Accountancy and Business Statistics  
(Financial Accounting)
2. Economic Administration & Financial Management  
(Indian Economy)
3. Business Administration  
(Business Organisation)



## SECOND YEAR T. D. C. EXAMINATION

## CORE SUBJECTS :

Each subject will have two papers and each paper will be of 3 hours duration and carry 100 marks, the minimum pass marks in each subject being 72.

1. *Accountancy and Statistics*  
Paper I : Financial & Cost Accounting  
Paper II : Statistical Methods.
2. *Economic Administration & Financial Management :*  
Paper I : Principles of Economics  
Paper II : Money, Banking & Public Finance.
3. *Business Administration :*  
Paper I : Business Communication & Salesmanship.  
Paper II : Business Law.

## OPTIONAL SUBJECTS :

Each subject will have one paper of 3 hours duration and carry 100 marks; minimum pass marks in each subject being 36.

The candidates will be required to offer any one of the following subjects :

1. *Costing and Quantitative Methods*  
Paper I : Quantitative Methods and their application.
2. *Labour and Industrial Relations*  
Paper I : Labour Legislation
3. *Banking and Co-operation*  
Paper I : Law and Practice of Co-operation
4. *Steno-typing :*  
Paper I : Type-writing (Hindi/English)

## FINAL YEAR T.D.C. EXAMINATION

### CORE SUBJECTS :

Each subject will have two papers and each paper will be of 3 hours duration and carry 100 marks; the minimum pass marks in each subject being 72.

1. *Accountancy and Statistics :*

Paper I : Taxation Law and Accounts.

Paper II : Auditing.

2. *Economic Administration & Financial Management :*

Paper I : Planning and Economic Development.

Paper II : Elements of International Finance.

3. *Business Administration :*

Paper I : Company Law & Secretarial Practice.

Paper II : Elements of Management.

### OPTIONAL SUBJECTS :

Each subject will have one paper of 3 hours duration and carry 100 marks; minimum pass marks in each subject being 36.

The candidates will be required to offer any one of the following subjects :

1. *Costing and Quantitative Methods*

Paper II : Costing.

2. *Labour and Industrial Relations :*

Paper II : Industrial Relations.

3. *Banking and Co-operation*

Paper II : Law & Practice of Banking.

4. *Steno-typing :*

Paper II : Short Hand (Hindi/English).

## APPENDIX III

(Ref :—*Reso. No. 6 of Academic Council dated 23rd April 71*)  
 Copy of letter No. 1299/71-72 dated 6th April, 1971  
 from Dr. S. P. Varma, Professor of Political Science, University of Rajasthan, Jaipur to the Registrar, University of Rajasthan, Jaipur.

Sub : Minutes of the Board of Studies in Political Science.

Part of the recommendations of the Board of Studies were conveyed to you earlier and have been printed in the minutes of the meetings of the Board of Studies. I am here-with supplying some additional information.

Page 10 B.A. Pass Final Year Examination of 1974.  
 Paper I (b) *Political Concepts and Political Ideologies*—

The names of the following books may be printed as recommended books :

- (1) Dahl, *Modern Political Analysis*
- (2) Oram Young, *System of Political Science*.
- (3) Karl Fredrich, *Political Science : Introduction*.
- (4) Coker, *Recent Political Thought* (English and Hindi)

Page 12 Group C—M.g. papers VII and VIII—

(i) *Public Administration in India*—Add to the list of additional readings (page 340 of the University syllabus published in 1970).

- (8) Simon, Smithburg & Thompson, *Public Administration*.
  - (9) Marx, *Administration Stop*.
  - (10) Wriggs, *Ecology of Public Administration*.
- Page 13, Group F, *Sociology*.

The revised papers would be as follows :

- Paper I—Modern Sociological Analysis  
 Paper II—Social Anthropology  
 Paper III—Political Sociology.

The detailed courses are given vide Appendix 'A'.  
 Page 13—*Post M.A. Diploma in International Affairs, 1972*.

Paper I—The title to be reworded as follows.:

*Theories of International Relations and Research Methodology.*

(Syllabus to be the same as printed on pages 13 and 14), to which the following books are to be added in the list of recommended books :

- (12) Knorr and Rosenau, eds., *Contending Approaches to International Politics*, Princeton University Press, 1969.
- (13) David East and Rosenau, eds., *The Analysis of International Politics*, Free Press, New York, 1971.

Page 13, Paper II—*International Politics since 1945, with special reference to—*

- (a) The Role of Major Powers, and
- (b) Contemporary Education Areas in the world.

This will involve a study, in depth, of (a) the Foreign Policies of Major Powers—U.S.A.,/U.S.S.R., China, Britain and France—both at the global level and with regard to various regions, like Western Europe, Eastern Europe, Southeast Asia, South Asia, West Asia, Africa, Latin America, etc., and (b) Major Education Areas in the Contemporary world—with emphasis on—

- ( i ) Berlin and German Question
- (ii ) The Korean War
- (iii) Conflict in Indo-China and the problem of Vietnam
- (iv) The Arab Israel conflict.
- (v) The Sino-Soviet rift
- (vi) Sino-Indian dispute over frontiers, and
- (vii) The Indo-Pakistan confrontation over Kashmir

*Books recommended :*

- (1) Spanier, John w., *American Foreign Policy since World War II*, Fredrick A. Praegar, 1960.
- (2) Dallin, Alexander, ed., *Soviet Foreign Policy after Stalin*, J. B. Lippincott Co., New York, 1961.

- (3) Kenna George, *Soviet Foreign Policy under Lenin and Stalin*, Little Brown & Co., 1961.
- (4) Griffith, William E., *The Sino-Soviet Rift*, M. I. T. Press, 1964.
- (5) Northedge, F.S., *Betral Foreign Policy*, Fredrick A., Praeger, New York, 1962.
- (6) Macridis, Roy C., *The Small : Implecable Ally*, Harper & Row, New York, 1966.
- (7) Hartmann, Fredrick H., *Germany between East and West : The Reunification Problem*, Englewood Cliffs, 1965.
- (8) Davison w., Phillips, *The Burton Blockade : A Study in Cold War Politics*, Princeton University Press, 1958.
- (9) Boyd, R.S., *Communist China's Foreign Policy*, Fredrick A Praeger, 1962.
- (10) Dutt, V.P., *A China's Foreign Policy, 1958-62*, Asia Publishing House, 1964.
- (11) Varma, S.P., *Struggle for the Himalayas : A study in Sino-Indian Problems*, Sterling Publications, New Delhi, Rev. ed., 1971.
- (12) Gupta, Sisir, *Kashmir : A Study in India-Pakistan Relations*, Asia, 1966.

For an up-to-date coverage, the student is referred to contemporary journals in international politics and foreign policy, like *Foreign Affairs*, *International Affairs*, *World Politics*, *International Studies*, *India Quarterly* etc.

Page 13-Group H—

Paper I—Add  
Core Books :

(page 392 of the 1970 syllabus—for books)

(5) Hays and Ronald D. Hedluad, ed.,

*The Conduct of Political Enquiry, Behavioural Political Analysis*, Prentice-Hall, Inc., Englewood, Cliffs, New Jersey, 1970.  
Courses to remain the same.

Note : Group H seems to have been dropped at the time of printing the minutes through over-sight. This may kindly be added now.

The details of some of the papers still remain uncompleted. For the papers VII and VIII, Economics Group, I am awaiting Dr. Narula's suggestions. Dr. Iqbal Narain had taken the responsibility of filling up the details of some other courses. Since he could not complete them before he left for the United States, I am afraid, we have wait for them till the end of this month.

## APPENDIX 'A'

*Group-F : SOCIOLOGY**Paper—I Modern Sociological Analysis*

- I. *Sociological Perspective* : Definition and scope of Sociology. Sociology and other social sciences. Models of analysis : Evolutionism Vs. Diffusionism, Organismic school, Structural-Functional Approach, Conflict model, Historical approach.
- II. *Social Relationship* : What is *Social* ? Unit-Act. Social Interaction. Status and Role (including status-set, role-set, and status-sequence)
- III. *Social System* : Distinction between personality system and social system. Group and sub-groups. Typology of groups. Reference groups.  
Society as a social system. Functional requisites of society.  
Functional interchanges between different subsystems.
- IV. *Social Stratification* : Universality of stratification. Caste and Class. Social Stratification in India.
- V. *Social Processes* : (A) Institutionalization. Socialization. Social Control.  
(B) Competition and Conflict.  
(C) Social Change. Social Change in India.

*Core Books*

Inkeles, Alex	<i>What is Sociology ?</i>
Johnson, Harry M.	<i>Sociology—A systematic Introduction.</i> (Hindi translation by Yogesh Atal)
Levy, Marion J.	<i>The Structure of Society</i>
Bottomore, T.B.	<i>Sociology</i> (Hindi translation by Upreti.)

*Supplementary reading*

Mills, Theodore M.	<i>The Sociology of Groups</i>
Moore, Wilbert E.	<i>Social Change</i>
Tumin, Melvin M.	<i>Social Stratification</i>
Atal, Yogesh	<i>The Changing Frontiers of Caste</i> (Chapter I)

Srinivas, M N.	<i>Social Change in Modern India</i>
Srinivas, M.N.	<i>India : Social Structure</i> ( GOI Publication)

Paper II : *Social Anthropology*

- I. *Anthropology as a generalizing science of Man : Branches of Anthropology. Its relations with biological and social sciences.*
- II. *Biological Foundations of Culture.*
- III. *Concept of Culture : Definition. Attributes. Integration of Culture : Configurational, thematic, and functional approaches.*  
*Culture and Personality.*  
*Race, Language/and culture.*
- IV. *Social Organization : Marriage, Family, and Kinship.*
- V. *Variety of Economic Organization in the Primitive World*
- VI. *Magic and Religion.*
- VII. *Primitive Law and Government*
- VIII. *The Indian Scene : Glimpse of Tribal India.*  
*Village India : Social Structure of the village.*  
*Anthropological approach to the study of complex cultures.*
- IX *Applied Anthropology : Anthropology in Industry. Anthropology in Administration. Anthropology and Sociology in Programmes of Planned change.*

*Core Books*

Hoebel, E.A.	<i>Man in the Primitive World</i>
Beattie, John	<i>Other Cultures</i>
Beals, Ralph & Hoijer, Harry	<i>An Introduction of Anthropology</i>
Keesing, Felix M.	<i>Anthropology : The Science of Custom</i>
Titiev, Mischa	<i>The Science of Man</i>
Majumdar, D. N. & Madan, T.N.	<i>An Introduction to Social Anthropology</i>
Dube, Shyama Charan	<i>Manav Aur Sanskriti (Hindi)</i>
Atal, Yogesh	<i>Adivasi Bharat (Hindi)</i>



Desai, A.R. (Ed.)  
Kluckhohn, Clyde

*Rural Sociology in India*  
*Mirror for Man*

### *General References*

Kroeber, R.L.  
Firth, Raymond

*Anthropology Today*  
*Human Types*

Schapera, I.

*Government and Politics in Tribal Societies*

Mair, Lucy

*Primitive Government*

Radcliffe-Brown, A.R.

*Method in Social Anthropology* (ed. Srinivas, M.N.)

Barnett, H.G.

*Anthropology in Administration*

Mead, M.

*Cultural Patterns and Technical Change*

Spicer, E.H.

*Human Problems in Technological Change*

### *Paper III : Political Sociology*

- I. *Introducing Political Sociology* : Political Sociology as study of the social bases of Politics. Growth of Political Sociology.

Models for the Analysis of Political Behaviour :

a. Normative approach

b. Systems approach

( i ) Parsons and Easton (General systems)

(ii ) Karl Deutch (Information theory)

(iii) Almond (Political Culture)

- II. *Polity and Social structure* : Polity as a social subsystem. Institutional manifestations of Polity : State, Government, and Nation. Forms of Government : Typology based on Legitimacy. Bureaucracy. Sociological requisites of Democratic Polity.

- III. *Political Behaviour* : Social Stratification and Political participation (with spl. ref. to Elites). Politics of Mass Society. Induction into politics : Political Socialization. Party Politics (esp. contributions of Michels, Durverger, and Dehl). Voting, Voting in India.

IV. *Politics and Social Change : Modernization : Definition and approaches (esp. Lerner, Apter, Levy, and Huntington) Tradition and Modernity in India.*

Communication and Modernization : Communication and Social System. Mass Communication : Definition, functions, and effects. Strategies of Communication. Nation-Building and National Integration (with spl ref. to India)

V. *Methodology of Modern Political Analysis : Normative Vs. empirical research. Elements of Survey Research. Panel studies. Content Analysis. Gallup Polls. Aggregate analysis.*

Index—construction. Indices—SES (Index of Status Characteristics, Evaluated Participation), SPE (Sense of Political Efficacy), Political Participation, Congress Multiplier.

VI. *Political Sociology in India : Survey of Research and Current Trends.*

*Core Books*

Liset, S.M.	<i>Political Man</i>
Deutch, K.W	<i>The Nerves of Government</i>
Mackenzie, W.J.M.	<i>Politics and Social Science</i>
Dahl, Robert	<i>Modern Political Analysis</i>
Eulau, H. et al (ed.)	<i>Political Behaviour</i>
Eulau, H.	<i>Behavioural Persuasion in Politics</i>
Kothari, Rajni	<i>Politics in India</i>
Almond, G. Et al.	<i>Comparative Politics : A Developmental Approach</i>

*Supplementary Reading :*

Atal, Yogesh	<i>Local Communities and National Politics</i>
Kornhauser, W.	<i>Politics of Mass Society</i>
Hyman, H.	<i>Political Socialization.</i>
Pye, Lucin (ed.)	<i>Communication and Political Development</i>
Lerner, D.	<i>The Passing of Traditional Society</i>
Kothari, Rajni (ed.)	<i>Caste in Indian Politics</i>

- Levy, Marion J.      *Modernization and the Strncture of Societies*
- Apter, David      *The Politics of Modernization*
- Michels, Robert      *Political Parties*
- Duverger, Maurice      *Political Parties*
- Nordlinger, Eric A.      *Politics and Society*  
(ed.)
- Bottomore, T.B.      *Elites and Society*
- Rudolph, L.I. &  
Rudolph, Soeber      *The Modernity of Tradition*
- Lynch, Owen M.      *The Politics of Untouchability*  
Weieer, Myron      *Party Politics in India.*

## APPENDIX IV

(Ref. Reso. No. 7 of A.C.C. dated 23rd April, 1971)

Minutes of the meeting of the Committee appointed by the Faculty of Science at its meeting held on 8th February, 1971 to recommend rules for holding viva-voce examination in Mathematics for the M.A./M.Sc. Final Examination.

The following members were present :

1. Shri S.S. Lal Mathur, Bikaner.
2. Shri R.C. Gaur, Ajmer.
3. Dr. N.D. Gautam, Jaipur.
4. Dr. M.C. Gupta, Jaipur.
5. Dr. G.C. Patni (Convener)

After deliberations the following decisions were taken—

### 1. *Scope of the Viva-Voce Examination.*

It was resolved to recommend that

- (i) Oral questions in Viva-voce should be asked to ascertain the understanding of the fundamentals of the subject by the students.
- (ii) More weightage should be given to the questions related to topics being taught in M.A./M.Sc. Final class.

### 2. *Composition of the Board of Examiners*

It was resolved to recommend that the Board of examiners should consist of four members as follows :—

- (i) The Head of the University Department of Mathematics (Convener)
- (ii) One external examiner to be appointed by the Vice-Chancellor/Syndicate on the recommendation of the Examiner's Committee.
- (iii) Two internal examiners :
  - (a) One of whom will be the Head of the Department of the Institution concerned.

Notes : In case of University Department, this internal examiner shall be appointed by rotation from amongst the Heads of the Post-graduate Departments in Maths. in the affiliated Colleges.

- (b) The other internal examiner will be appointed by the Vice-Chancellor/Syndicate on the recommendation of the examiners selection committee from amongst the local Post-graduate teachers of the Institution concerned having at least 5 years' experience of teaching post-graduate classes.

Note : In case no local teacher is available, the Board will consist of only three members.

3. The Committee also recommended that at least one period paper per week be allotted for preparing the students for the viva-voce examination.

Sd/—  
(Dr. G.C. Patni)  
*Convener*

## APPENDIX-V

*(Ref : Resolution No. 9 (ii) C of the Academic Council dated 23rd April, 1971)*

R.43—C be re-written as follows :—

R.43—C : A candidate who obtain at least 36% marks in each subject (except the compulsory subject of General English prescribed for the First Year Shastri Examination passing in which will not be necessary for the examination of 1972, 1973 and 1974) shall be declared successful at each of the three examinations; provided that where a practical test is prescribed, a candidate shall be required to obtain at least 25% marks in theory and practical separately and 36% marks in theory and practical combined in each subject.

No division shall be awarded at the First Year and Second Year Shastri examinations.

Successful candidates at the Final Year Shastri Examination shall be placed in three divisions. Those obtaining 60% or more marks in the aggregate of optional—Main optional as well as optional subjects of all the three examinations shall be placed in First Division, those obtaining 48% or more marks shall be placed in Second Division and the rest in Third Division. Candidates securing 75% or more marks in the subject(s) of Group II and/or Group III shall be awarded Distinction in that group. In the case of candidates admitted to the Second Year of the Shastri Course after passing an examination other than the First Year Shastri examination other than the First Year Shastri examination of the University, the marks obtained by them at the Second and the Final Year Shastri examinations shall be taken into account for awarding division.

Each written paper shall be of 3 hours duration. Practical Test, wherever provided will be conducted by an examiner appointed by the University at a place and on a date and time fixed by the University.

The medium of question-papers and their answers will be as follows :

- (a) Sanskrit for the compulsory subject of Samanya Sanskrit, the main optional subjects under Group II and the optional subjects of Phalit Jyotish and Samanya Pourohitya under Group III.

- (b) English for the compulsory subject of General English and the optional subject of English Literature under Group III.
- (c) The language concerned for the optional subject of Foreign language under Group III.
- (d) Hindi for all the remaining subjects.

## FIRST YEAR SHASTRI EXAMINATION

Group & Subject	No. of Papers	Max. marks in the subjects			Total
		Paper I	Paper II	Practical	
1	2	3	4	5	6
<i>Group I—Compulsory</i>					
1. Samanya Sanskrit.	1	100	—	—	100
2. General English.	1	100	—	—	100
<i>Group II—Main Optional : One of the following (subject to the condition laid down in O.329 M-II).</i>					
1. <i>Veda</i> —One of the four Vedas viz., Rigveda, Yajurveda, Samveda and Arthveda (with practical).	2	100	60	40	200
2. Vyakarana.	2	100	100	—	200
3. Sahitya.	2	100	100	—	200
4. Samanya Darshan	2	100	100	—	200
5. Vedanta.	2	100	100	—	200



I	2	3	4	5	6
6. Mimansa	2	100	100	—	200
7. Nyaya.	2	100	100	—	200
8. Jyotish (with practical)	2	100	60	40	200
. Dharmashastra	2	100	100	—	200
10. Jain Darshana	2	100	100	—	200
11. Buddha Darshana	2	100	100	—	200
12. Paurohitya (with practical)	2	100	60	40	200
13. Puranetihas	2	100	100	—	200
<i>Group III-Optional Any two of the following</i>					
1. Hindi Literature	1	100	—	—	100
2. English Literature	1	100	—	—	100
3. Foreign Language (German, or French) or Russian or Persian	1	100	—	—	100
4. History	1	100	—	—	100
5. Political Science	1	100	—	—	100
6. Economics	1	100	—	—	100

7. Statistics	1	100	—	—	100
8. Public Admn.	1	100	—	—	100
9. Psychology	1	100	—	—	100
10. Sociology	1	100	—	—	100
11. Home Science	1	100	—	—	100
12. Phallt Jyotish (with practical)	1	60	—	40	100 (only one of these two can be offered)
13. Samanya Paurohitya (with practical)	1	60	—	40	100
14. Bhasha Vigyan and Sanskrit Bhasha Ka Uthas.	1	100	—	—	100

## SECOND YEAR SHASTRI EXAMINATION

*Group I-Compulsory :*

1. Samanaya Sanskrit	1	100	—	—	100
2. General Hindi	1	100	—	—	100

1	2	3	4	5	6
<i>Group II—Main Optional One of the following</i>					
1. Veda—One of the four Vedas viz. Rigveda, Yajurveda, Samveda and Arthveda	2	100	100	—	200
2. Vyakaran	2	100	100	—	200
3. Sahitya	2	100	100	—	200
4. Samanya Darshana	2	100	100	—	200
5. Vedanta	2	100	100	—	200
6. Mimansa	2	100	100	—	200
7. Nyaya	2	100	100	—	200
8. Jyotish	2	100	100	—	200
9. Dharmashastra	2	100	100	—	200
10. Jain Darshana	2	100	100	—	200
11. Buddha Darshana	2	100	100	—	200
12. Paurohitya	2	100	100	—	200
13. Puranetihas	2	100	100	—	200

*Group III-Optional : Any two of the following*

1. Hindi Literature	1	100	—	—	100
2. English Literature	1	100	—	—	100
3. Foreign language (German or French or Russian or Persian)	1	100	—	—	100
4. History	1	100	—	—	100
5. Political Science	1	100	—	—	100
6. Economics	1	100	—	—	100
7. Statistics	1	100	—	—	100
8. Public Administration	1	100	—	—	100
9. Psychology	1	100	—	—	100
10. Sociology	1	100	—	—	100
11. Home Science	1	100	—	—	100
12. Phalit Jyotish	1	100	—	—	100
13. Samanya Paurohitya	1	100	—	—	100
14. Bhasha Vigyan and Sanskrit Bhasha Ka Itihas	1	100	—	—	100

## FINAL YEAR SHASTRI EXAMINATION

*Group-I-Compulsory :*

1. Samanya Sanskrit

	1	2	3	4	5	6
1. Samanya Sanskrit	2	100	100	—	200	

*Group II-Main Optional : One of the following :*1. *Veda*-One of the four Vedas viz., Rigveda, Yajurveda, Samveda and Arthveda (with practical)

1. <i>Veda</i> -One of the four Vedas viz., Rigveda, Yajurveda, Samveda and Arthveda (with practical)	2	100	40	60	200	
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2. Vyakarana

2. Vyakarana	2	100	100	—	200	
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3. Sahitya

3. Sahitya	2	100	100	—	200	
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4. Samanaya Darshana

4. Samanaya Darshana	2	100	100	—	200	
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5. Vedanta

5. Vedanta	2	100	100	—	200	
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6. Mimansa

6. Mimansa	2	100	100	—	200	
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7. Nyaya

7. Nyaya	2	100	100	—	200	
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8. Jyotish (with practical)	2	100	50	200
9. Dharmashtra	2	100	—	200
10. Jain Darshana	2	100	—	200
11. Buddha Darshana	2	100	—	200
12. Paurohitya (with practical)	2	100	60	200
13. Puranetihas	2	100	—	200
14. Group III—Optional : Any two of the following :				
1. Hindi Literature	1	100	—	100
2. English Literature	1	100	—	100
3. Foreign Language (German or French or Russian or Persian)	1	100	—	100
4. History	1	100	—	100
5. Political Science	1	100	—	100
6. Economics	1	100	—	100
7. Statistics	1	100	—	100

1	2	3	4	5	6
8. Public Administration	1	100	—	—	100
9. Psychology	1	100	—	—	100
10. Sociology	1	100	—	—	100
11. Home Science	1	100	—	—	100
12. Phalit Jyotish (with practical)	1	50	—	50	100
13. Samanya Purohitya	1	50	—	50	100
14. Bhasha Vigyan and Sanskrit Bhasha Ka Itihas,	1	100	—	—	100

## APPENDIX VI

(Ref. Reso. No. 12 of A.C.C. dated 23rd April 1971)

Minutes of the meeting of Committee of courses in General Education held on 18th January, 1971 at 12 noon at the University Office, Jaipur.

### Present

1. Dr. G.C. Pande (Chairman)
2. Dr. D.D. Narula
2. Shri M.L. Agarwal
4. Shri A.M. Ghose

1. The committee considered the criteria for inclusion of teachers in the panel of examiners for General Education and made the following recommendations (in order of priority).

- I. All teachers appointed for General Education with the minimum necessary teaching experience of 3 years.
- II. All such teachers in Social or Natural Science and have completed 3 years teaching experience of General Education.
- III. All such teachers belonging to Natural or Social Sciences subjects as have completed 5 years teaching experience.

The office may revise the panel and include the names in the panel in the light of above criteria.

2. The committee did not offer any comments on the question paper and the report of examiners. On page 4, in Q. No. 3 (ग) (ii), there is a printing mistake देवराव has been printed as देवराव such printing errors should be avoided in further.

2. The committee recommended the syllabus for the First Year T.D.C. (Arts, Science and Commerce) Examination of 1972. *Vide Appendix.*

Sd/—G.C. Pande  
Chairman



## APPENDIX

## (i) GENERAL EDUCATION

One Paper

100 marks

3 hours duration

Scheme of Examination in each group. Natural Science and Social Science.

- |  |                |          |       |
|--|----------------|----------|-------|
| 1. Essay one                                       | Max. Words 600 | 20       | marks |
| 2. Notes two                                       | "              | 200 each | 20 "  |
| 3. Objective type questions                        |                |          |       |
| (10 questions to be attempted out of 15 questions) |                | 10       | "     |

## A. Social Science.

Note : The approach should be general and should not be technical or specialised.

1. Essential features of the Indian Tradition Ref. (Jedunath Sarkar's : India Through the Ages.) Ref. Sudhakar Chattopadhyaya : Indian Tradition. Published by Indian National Commission.)
2. Modern Western Ideas—Secularism Nationalism. Ideas which are conducive to Progress (the role of the scientific and technological revolution. Socialism individual's place in Society, (Place of women in Society).
3. Democracy. Indian Constitution—Ideas and problems of National integration.
4. Achievements and Shortcomings of planned Economic Development since 1951; Salient Features of IV Five Year Plan.
5. Contemporary Indian Society—Ideas and Tendencies. (Caste, Family and Mobility)
6. Art and literature in Contemporary India. (Literature with special reference to Hindi Literature, Theatre, Music, Rajasthan Painting and Rajasthan folkdance.)

## B. Natural Science

Note : The approach should be general and should not be technical or specialised.

1. Scientific method and outlook.
2. The General Development of Scientific ideas  
(Evolution, Relativity, Quantum Theory)
3. Major Applications of Science and Technology  
(Atomic Energy, space Travel, Automation, Anti-  
biotics, Synthetics) organ transplantation.
3. Population; Public Health; Balanced diet.

Books recommended for teachers :

1. Jadunath Sarkar's India Through the Ages.
2. S. Chattopahyaya : Indian Tradition.
3. Alen Isacs : Introducing Science, Pelscon (A 562)  
(1963).
4. A.R. Ubbeldhode : Man and Energy, Pelican Books  
(A 600) 1264.
5. Technology and Economic Development, 1966  
(A Scientific American Book—Penguin).
6. Scientific American August 1959 issue.
7. Science Today (A Times of India Publication, a  
monthly magazine).

Bibliography on General Education for teachers.

1. Stnart Chase : The proper Study of Mankind  
(Harper, res, edu. 1956).
2. Robinson : India, A short Cultural History.
3. De Bary : Source of Indian Tradition.
4. Tara Chand : Influence of Islam on Indian  
Culture
5. Shri Aurobindo : Fundamentals of Indian Culture.
6. Majumdar & Altekar : A new History of the Indian  
People.
7. Raghuvaushi : Indian Nationalist movement and  
Thought.
8. Kapadia : Marriage and Family in India.

9. Srinivas : Caste in Modern India.
10. Prabhu : Hindu Social Organization.
11. Singh, G.N. : Landmarks in the National and Constitutional Development of India.
12. Venkatasubarah : Indian Economy since Independence.
13. Ghose Alak : Indian Economy, Its nature and Problems.
14. Zinkin, Maurice : Asia and the West.

## APPENDIX VII

*(Ref : Reso. No. 21 A.C.C. dated 23rd April 1971)*

Minutes of the meeting of the Committee held on 16th March, 1971 at 12.00 noon in the University Office, Jaipur, for considering the proposal of the Regional College of Education, Ajmer for starting vacation cum-correspondence courses leading to the B.Sc. (Degree and also the question of awarding B.Sc. Degree to a candidate after passing the 3rd Year Examination of the Four Year integrated B.Sc. (Pass/Hons.) Course, as per resolution of the Faculty of Science at its meeting held on 8th February, 1971.

### Present

1. Dr. P.N. Mathur. Chairman
2. Dr. B. Tiagi
3. Dr. G.C. Patni
4. Dr. M.W. Chaudhary
5. Dr. A.N. Bose
6. Shri U.S. Gaur (Special Invitee)

1. The Committee examined the proposed structure of vacation cum-correspondence course for B.Sc. as proposed by the Principal, Regional College of Education, Ajmer. It was felt that the calculation regarding number of periods/working hours available for teaching and practicals was very much on the higher side. The period from 15th March to 15 July as proposed for the said Course seems to be not feasible as teaching in Schools is continued upto 15th April, and it might not be possible for the Institutions to spare the teachers before 15th April. Like-wise, since School reopen on 1st July the difficulty will again arise in sparing teachers beyond 30th June. Also, in Rajasthan there is only one break during Dushehra—Diwali, and it is possible to utilise ten days out of this long break.

2. Therefore, the Committee resolved to recommend that :—

- (i) During Summer vacation the classes should be organised from 16th April to 30th June.
- (ii) A ten days programme be arranged during the Dusehra—Diwali break (the dates to be announced by the Principal).
- (iii) The total number of days under (1) & (2) will be 86 (including Sundays and other Holidays).
- (iv) Teaching should be done for 8 periods of 45 minutes duration on each working day so that the total number of periods per academic session comes to 560.
- (v) A teacher candidate under this scheme shall have to put in an attendance of at least 80%.
- (vi) Instructions by Correspondence shall continue in the rest of the session.
- (vii) Candidates under this scheme will be admitted to the University Examinations along with the regular students for the same Examination and on the condition that he/she has completed the Course both by Correspondence and regular attendance in lectures and practicals.
- (viii) Candidates under the scheme are subjected to the same rules and regulation as applied to regular candidate for the I, II & Final Year T.D.C. Science Examination.

3. The Committee also examined the question of awarding B.Sc. degree to a candidate after passing the IIIrd Year Examination of the Four Year integrated B.Sc. (Pass/Hons.) B.Ed. course of Regional College of Education, Ajmer and resolved to recommend that :

The Scheme can be accepted on the conditions that in the I, II and III Year the courses/syllabi will remain as in the Faculty of Science without any modifications or alterations and students will be entitled for B.Sc. (Pass/Hons.) as the case may be. However if a student after passing B.Sc. (Pass/Hons.) decides to offer B.Ed. course, he can do it in the IV Year. Institution, if it so desires can

give instructions in the fields of Educational interests and may award its own certificates. If however, a student continues in the fourth year without taking the B.Sc. Pass degree even after passing the examination at the end of III Year he will after passing the Fourth Year examination be awarded the combined degree of B.Sc. B.Ed. or B.Sc. (Hons.) B.Ed.

Sd/-P.N. Mathur.

*Chairman*

## APPENDIX VIII

*Ref:—Res. No. 26 of Academic Council 23rd April, 1971.*

Minutes of the meeting of the Equivalence Committee held on Tuesday, the 6th April, 1971 at 11 a.m. in the University Office, Jaipur.

## PRESENT

1. Prof. P.L. Bhatnagar, Vice-Chancellor (In the Chair)
2. Dr. B.N. Consul,  
Dean, Faculty of Medicine & Pharm.
3. Prof. G.C. Pande,  
Dean, Faculty of Arts.
4. Vaidya Mohan Lal Bhargava,  
Dean, Faculty of Ayurveda.
5. Prof. P.L. Bhargava,  
Dean, Faculty of Sanskrit Studies  
Shri J.N. Mathur, Dy. Registrar,

1. The minutes of the meeting of the Equivalence Committee held on 12th February, 1970 were *confirmed*.

2. With reference to its Resolution No. 22 dated the 25th March, 1968 recognising provisionally the examinations of Berhampur University, Berhampur (Orissa) on reciprocal basis till the examinations of 1970, the Committee considered the question of granting permanent recognition to the following examinations of the Berhampur University :

P.U.C. (Sc.); B.Sc., M.Sc., B.Com.,  
B.Ed., LL.B. (3 year course); M.B., B.S.,  
P.U.C. (Arts); B.A., M.A., M.Com., and  
P.U. (Com.)

In this connection the Committee noted that the Deans of the Faculties concerned had expressed a favourable opinion in respect of the aforesaid examinations, except that in the case of M.Com. and P.U. (Com.) examinations the opinion of the Dean, Faculty of Commerce was awaited.

*Resolved to recommend* that—(i) provisional recognition to M.Com. and P.U. (Com.) examinations of the Berhampur University be extended for two years and meanwhile the

opinion of the Dean be obtained for consideration of the Committee at its next meeting and (ii) permanent recognition be given to the rest of the examinations of the Berhampur University as equivalent to the corresponding examinations of the University, *on reciprocal basis*.

3. With reference to its Resolution No. 20(2) dated the 26th February, 1969 in regard to the question of recognition of the New Zealand School Certificate of Attainment conducted in Fizi by the New Zealand Department of Education that the Committee considered letter No. EV/II (117)/69/31580 dated the 28th February, 1970 from the Evaluation Officer, Inter-University Board of India & Ceylon communicating the resolution of the Board's Standing Committee to the effect that the above examination be considered as equivalent to the Pre-University—Higher Secondary in India.

*Resolved to recommend* that the New Zealand School Certificate of Attainment conducted in Fizi by the New Zealand Department of Education be recognised as equivalent to the Pre-University examination of the University.

4. With reference to its Resolution No. 5 dated the 26th February, 1969 recognising provisionally the LL.B. examination of the South Gujrat University, Surat subject to the condition that the question of according permanent recognition to the above examination be brought before the Committee again together with the views of the Dean of the Faculty concerned after he had looked into the scheme of examination and syllabi for the same, the Committee considered letter No. 254 dated the 16th March, 1970 of the Dean, Faculty of Law stating that there was no objection in granting recognition to the LL.B. (General) and LL.B. (Special) examinations conducted by the South Gujrat University, Surat, as equivalent to the LL.B. (Academic) and LL.B. (Professional) examinations respectively of the University.

*Resolved to recommend* that the Dean's advice be accepted and recognition granted accordingly, *on reciprocal basis*.

5. With reference to its Resolution No. 6 dated the 26th February, 1969 recognising provisionally the examinations of the Kanpur University subject to the condition that the question of according permanent recognition be brought before the Committee again, together with the views of the Deans of the Faculties concerned after they had looked into the relevant syllabi and scheme of examination, the Committee considered



the question of granting permanent recognition to the following examinations of the Kanpur University :

B.Sc., M.Sc., B.Sc. (Agr.); M.Sc. (Agr.);

B.Com., M.Com., B.Ed., M.Ed.,

LL.B. (Three-year course); B.Sc. (Engg.)

Civil, Electrical & Mechanical;

B.A., and M.A.

In the connection the Committee noted that the Deans of the Faculties concerned had expressed a favourable opinion in respect of the aforesaid examinations, except that in the case of B.A. and M.A. examinations the Dean of the Faculty of Arts had required additional information before finalising his opinion.

*Resolved to recommend* that (i) provisional recognition to B.A. and M.A. examinations of the Kanpur University be extended for two years and meanwhile the additional information required by the Dean be obtained so as to enable him to finalise his opinion and (ii) permanent recognition be given to the rest of the examinations of the Kanpur University as equivalent to the corresponding examinations of the University, *on reciprocal basis*.

6. The Committee considered letter No. Ac-1-70/4217-88 dated 1.5.1970 from the Registrar, Kurukshetra University, Kurukshetra read with his subsequent letter No. Ac-1-71/950-1039 dated 20.1.1971 requesting to recognise the Certificate course in French Examination of that University as equivalent to the corresponding examination of the University.

In this connection the Committee noted that the Dean of the Faculty of Arts to whom a reference was made in the matter had, vide his letter No. 1305 dated 15.3.1971, stated that the course of Kurukshetra University appeared to have very little emphasis on the ability of the candidates to write French and also that there were two papers for the certificate course in French Language having a total of 160 marks whereas our University prescribed a total of 200 marks.

*Resolved that* (i) the Dean be requested to examine the matter further and give his recommendation and (ii) the Vice-Chancellor be *authorised* to accept the recommendation of the Dean.

7. The committee considered letter No. GA3/21664/70 dated the 19th October, 1970 from the Registrar, University of Calicut, Calicut to the effect that said University came into existence with effect from 23.7.1968 by Act. No. 24 of 1968 of the Kerala Legislative Assembly and requesting for recognition of the following examinations conducted by it as equivalent to the corresponding examinations of the University, on the ground that the syllabi remained the same as those of Kerala University for all the courses ;

- |                          |  |
|--------------------------|--|
| 1. Pre-Degree            | 2. Bachelor of Arts.                   |
| 3. Bachelor of Science   | 4. Bachelor of Commerce                |
| 5. Master of Arts.       | 6. Master of Science                   |
| 7. Master of Com.        | 8. B. Sc. (Engg.)                      |
| 9. Bachelor of Education | 10. Preparatory Course in Engineering. |
| 11 M.B., B.S.            | 12. Bachelor of Ver. Science           |
13. *Title in Oriental languages :*
- (a) Vidwan
  - (b) Afzal-UI-Ulama
  - (c) Malpan title examn. in Syriac
  - (d) Adib-i-Fazil in Urdu.

In this connection it was reported to the Committee that all the Post-graduate, Degree and Intermediate examinations of the Kerala University stood recognised by the University.

*Resolved to recommend that :*

- (I) The examination at serial No. (1) above be recognised as equivalent to the Pre-University examination of the University.
- (II) The examinations at serial No. (10) above be recognised for purposes of admission to the First B.E. course of the University.
- (III) As regards that M.B., B.S., examination a reference be made to the Medical Council of India as to whether it had recognised the same, and then the matter be referred to the Dean of the Medical

Faculty for his views for consideration of the committee.

(IV) As regards examinations at serial Nos 12 and 13 above the Calicut University be informed that the University did not conduct corresponding examinations and, therefore the question of there recognition did not arise.

(V) The rest of the examinations of the Calicut University be recognised as equivalent to the corresponding examination of the University.

*Resolved to recommend further* that all recognitions as recommended above be on *reciprocal* basis, and provisionally for two years subject to examination of the detailed Ordinances, Regulations and syllabi of the Calicut University, by the Deans of the Faculties concerned.

8. With reference to its resolution No. 7 dated the 26th February, 1969 recognising provisionally the examinations of the Dibrugarh University, Assam on reciprocal basis subject to the condition that the question of according permanent recognition of the above examinations be brought before the Committee again together with the views of the Deans of the Faculties concerned after they had looked into the scheme of examinations and syllabi for the same, the Committee considered the question of granting permanent recognition to the following examinations of the Dibrugarh University;

P.U.C. (Sc.); B.Sc. (T.D.C.); M.Sc. in  
Physics, Chemistry, Statistics, Mathematics  
and Anthropology; P.U.C. (Com.)  
B.Com. (Pass); B.Com. (Hons.); P.U.C. (Arts);  
B.A. (T.D.C.); M.A. in English, Economics,  
History, Pol. Science and Sociology; and  
LL. B.

In this connection the Committee noted that the Deans of the Faculties concerned had expressed a favourable opinion in respect of the aforesaid examinations except that in the case of examinations in the Faculties of Arts and Law the opinion of the Dean concerned had not so far been received.

*Resolved to recommend* that (i) provisional recognition of P.U. (Arts), B.A. & M.A. examination in English,

Economics, History, Pol. Science and Sociology, and the LL. B. examination of the Dibrugarh University be extended for two years and meanwhile the opinion of the Deans concerned be obtained for consideration of the Committee at its next meeting. (ii) the Dibrugarh University be informed that the question of recognising their M.Sc. examination in Anthropology did not arise as the University did not conduct the similar examination, (iii) permanent recognition be given to the rest of the examinations of the Dibrugarh University as equivalent to the corresponding examinations of the University, on *reciprocal basis*.

9. The Committee considered the following recommendations Nos. 12 and 13 dated 23.10.1970 of the Board of Studies in Music as referred to by the Faculty of Aarts vide its Res. Nos. 6 and 8 dated 10th February, 1971 :

*Res. No. 12 of the Board :*

The Board decided that the B.Mus. and M.Mus. degrees of Banaras Hindu University, Varanasi and M.S. University, Baroda may be considered as equivalent to our degrees as both of these are constituted universities and they have a very good standing in the field of Music also.

*Res. No. 13 of the Board :*

The Board considered letter No. 1035/RU/PSS/2225 dated 20.9.1968 from the Registrar, Prayag Sangeet Samiti, Allahabad to recognise the following examinations conducted by the Prayag Sangeet Samiti, Allahabad as equivalent to the corresponding examination of the University :

- |                    |   |
|--------------------|---|
| 1. Sangeet Praveen | For appointment as a Lecturer in graduate classes.      |
| 2. Sangeet Acharya | For appointment as a Lecturer in Post-graduate classes. |

The Board considered the standing of the Institution, courses of study prepared for the examination and the duration fixed for completing these courses and *resolved that* the Sangeet Praveen degree of the Prayag Sangeet Samiti may be considered to be a suitable qualification for the purpose of employment as Lecturers. This degree may be regarded as equivalent to M.A. Music.

*Resolved that* since the question involved was of equivalence for purpose of appointments to teaching posts, the recommendations of the Board be *referred* to the Academic Council for consideration.

10. The Committee considered the question of recognition of the B.Com. and B.Com. (Hons.) examinations of the Bhagalpur together with the views expressed in that behalf by the Dean, Faculty of Commerce as contained in his letter No. 1232 dated 10th March, 1971 to the effect that the B.Com. (Pass) examination and B.Com. (Hons.) examination of the Bhagalpur University may be recognised as equivalent to the corresponding examinations of the University.

In this connection it was reported to the Committee that one candidate Shri Krishna Murari Lal Asthana who passed B.Com. examination from the Bhagalpur University had been allowed provisional admission in 1st Year LL.B. class at Government College, Ajmer.

*Resolved to recommend* that—(i) as advised by the Dean the B.Com. (Pass) and B.Com. (Hons.) examinations of the Bhagalpur University be recognised as equivalent to the corresponding examinations of the University, *on reciprocal basis* and (ii) the provisional admission of the aforesaid candidate be confirmed.

11. The Committee considered letter No. F. 7(25) Rectt-B 69-70/7317 dated the 3rd March, 1970 received from the Secretary, Rajasthan Public Service Commission, Ajmer requesting to intimate the Commission whether the M.Sc. (Hons.) School degree in Physics of the Punjab University, Chandigarh could be treated as equivalent to M.Sc. Degree of the Rajasthan University.

In this connection it was reported to the Committee that the Dean, Faculty of Science to whom reference was made in the matter had, vide his letter dated 15th March, 1971 advised that the B.Sc. and M.Sc. (Hons. School) examinations of the Panjab University, Chandigarh be recognised as equivalent to the corresponding examinations of the University.

*Resolved to recommend* that as advised by the Dean, the B.Sc. (Hons ) School) and M.Sc. (Hons. School) examinations of the Panjab University, Chandigarh be recognised as equivalent to the B.Sc. (Hons ) and M.Sc. examinations of the University, *on reciprocal basis*.

12. The Committee considered letter No. 3325 dated 20.10.70 from the Secretary, Board of Technical Education, Rajasthan, Jodhpur requesting the University to recognise the 'Diploma Course in Commercial Practice' (being run at the Demonstration Multipurpose Higher Secondary School under the Regional college of Education, Ajmer and affiliated to the above Board) as equivalent to the 1st year T.D.C. course of the University.

In this connection it was reported to the Committee that the Dean, Faculty of Commerce whose opinion was invited in the matter was of the view that the Diploma in Commercial Practice examination of the Board of Technical Education, Rajasthan, Jodhpur be recognised as equivalent to the 1st Yr. T.D.C. (Com.) examination of the University subject to the condition that a candidate who seeks admission to the second year T.D.C. (Com.) class be required to clear the Statistics Paper (or such papers depending upon the scheme of the B.Com examination in force) which he had not covered as a student of the Diploma in Commercial Practice.

*Resolved to recommend* that (i) as advised by the Dean, the Diploma Course in Commercial Practice of the Board of Technical Education, Rajasthan, Jodhpur be recognised for the purpose of admission to the Second Year T.D.C. (Com) course of the University and (ii) the matter be further referred to the Faculty of Commerce for prescribing (under O.86-A of the University Hand Book Pt. II) necessary conditions on which such a recognition could be granted in view of the proposed new scheme of B. Com. examination.

13. The Committee considered the question of granting recognition to the M.P.A. degree of Harvard University, U.S.A. as equivalent to the corresponding degree of the University.

*Resolved to recommend* that the M.P.A. degree of the Harvard University, U.S.A. be recognised as equivalent to the degree of Master of Arts in Public Administration of the University,

14. The Committee considered letter No. Acad. P.G./CE-RE/70/13371-13500 dated 23rd May, 1970 from the Registrar, Haryana Agriculture University, Hissar informing the University that the said University came into existence on the 2nd February, 1970 on the promulgation of the Haryana and Punjab Universities Ordinance, 1970 and would be conducting

its examinations for B.Sc.(Agriculture), B.Sc. (Animal Science B.V.Sc. & A.H., M.Sc. and Ph.D. in 1971 and subsequent years and requesting to recognise the examinations of that University, as equivalent to the corresponding exam. of the University, adding further that the Hissar Campus had been a part of the Punjab Agricultural University, Ludhiana and even now the rules, regulations, syllabi and courses of the parent University were adopted by the University.

In this connection it was reported to the Committee that the Pre-University (Agr.); F.Sc. (Ag.) B.Sc. (Ag.) and B.Sc. (Ag.) First Examination (New Regulation) examinations of the Punjab Agriculture University stood recognised by the University.

*Resolved to recommend* that (i) the B.Sc. (Ag.) and the M.Sc. examinations of the Haryana Agriculture University, Hissar be recognised as equivalent to the corresponding examinations of the University, on *reciprocal basis*, provisionally for two years pending detailed scrutiny of the Rules, Regulations and syllabi of these examinations to be obtained from that University and (ii) the Registrar, Haryana Agriculture University, Hissar be informed that the question of recognition of their B.Sc. (Animal Science) and B.V.Sc. & A H. examinations did not arise as the University was not conducting the same.

15. The Committee considered letter No. 14854/A dated 25th November, 1969 and letter No. 3/Recog/E/70/97 dated 12.1.1971 from the Registrar, Madurai University, Madurai requesting for recognising their following examinations as equivalent to the corresponding examinations of the University :

1. P.U. (Science)
2. M.Sc. (Chemistry)
3. B.Com., and
4. M.A. (Eco. & History).

In this connection the Committee noted that the Deans of the Faculties concerned had expressed a favourable opinion in respect of the aforesaid examinations, except that the Dean, Faculty of Arts had not yet finalised his opinion in respect of the M.A. examination in Economics and History.

*Resolved to recommend* that P.U. (Science), M.Sc. (Chemistry) and B.Com examinations of the Madurai University, Madurai be recognised as equivalent to the corresponding

examinations of of the University, *on reciprocal basis* and (ii) the M.A. examination in Economics and History of the University be recognised as equivalent to the corresponding examinations of the University provisionally for two years, on reciprocal basis, and meanwhile a copy of the Ordinances, Regulations and scheme of examination be obtained from the Madurai University and supplied to the Dean so as to enable him to finalise his opinion for consideration of the Committee.

16. The Committee considered a letter No. F.4-13/68-T2 dated September, 1970 from the Deputy Educational Adviser(T), Union Ministry of Education & Youth Services (Technical Division) requesting the Vniversity to recognise the National Diploma in Commerce awarded by the State Board of Technical Education, Kerala and Madras for purpose of admission to M.Com. course and informing that :

- (i) The All India Council for Tech. Education decided in February, 1957 that it should cease to affiliate institutions and hold examinations as and when the State Boards or other suitable organisations in each State were found to be in a position to take over these responsibilities.
- (ii) The National Diploma in Commerce awarded by the State Board of Technical Education, Kerala and Madras had been recognised by the All India Council for Technical Education and Government of India as equivalent to the N.D. in Commerce certificates awarded by the All India council itself for all purpose.
- (iii) As a token of its recognition, the N.D. in Commerce certificates awarded by the two State Boards were couter-signed by the Secretary, All India Council for Technical Education.

In this connection it was reported to the Committee that (i) the University had already recognised the N.D. in Commerce awarded by the All India Board of Technical Studies in Commerce, Government of India, Ministry of Education (Technical Division), New Delhi as equivalent to its B.Com. examination and (ii) the Dean, Faculty of Commerce Dr. Om Praksh was of the opinion that the N.D. in Commerce awarded by the State Boards of Technical Education, Kerala and Madras be treated at par with that of the Union Ministry of Education,



*Resolved to recommend* that the National Diploma in Commerce awarded by (i) State Board of Technical Education, Kerala and (ii) State Board of Technical Education, Madras be recognised as equivalent to the B.Com. examination of the University.

17. The Committee considered letter No. Gen/96/33504-628 dated 20.5.1970 received from the Asstt. Secretary, Central Board of Secondary Education, New Delhi requesting to recognise their (a) Matriculation, (b) Higher Secondary Pt. I and (c) Higher Secondary Pt II examinations for purpose of admission to higher courses of study in the University adding that the Board had started conducting these examinations w.e.f. March, 1970 for the Schools in Chandigarh Union Territory as per the same syllabus in which they used to be conducted by the Punjab University till the year 1969.

In this connection it was reported to the Committee that on a reference made to the Board of Secondary Education, Rajasthan, Ajmer the Secretary of the Board intimated to this office vide his letter No. Eq.27/133/3170 dated 2.2.1971 that the Board had accorded recognition to the said examinations as follows :

Examinations of the Central Board of Secondary Education, New Delhi.	Examinations of the Board of Secondary Education, Rajasthan.
1. Matriculation Examn. (if pass with five subjects)	Equivalent to the Secondary School Examn.
2. Higher Secondary Part I examination.	Equivalent to Secondary School examination.
3. Higher Secondary Pt. II examination.	Equivalent to higher Secondary Examination.

*Resolved to recommend* that—(i) the Matriculation examination (if pass with at least 5 subject-) and the Higher Secondary Part I examination of the Central Board of Secondary Education, New Delhi be recognised as equivalent to the High School Examination of the University conducted till the year 1957 and (ii) the Higher Secondary Pt. II examination of the said Board be recognised as equivalent to the Pre-University examination of the University.

18. The Committee considered letter No. 10809-886/AG dated 20.8 1970 from the Registrar, Guru Nanak University, Amritsar stating that the said University came into existence on the 24th November, 1969 by an Act No. 21 of 1969 of the Punjab Legislative Assembly and would be conducting the following examinations in 1971 and subsequent years, and requesting to recognise the same as equivalent to the corresponding degrees, examinations of the University, adding further that for the present they had adopted same courses and syllabi for these examinations as were prevalent in the Punjab University (the examinations of which had been recognised by the University of Rajasthan) :

- |  |  |                  |
|--|--|------------------|
| 1. Ratan   | 2. Bhushan   | 3. Prabhakar     |
| 4. Budhiman  | 5. Vidwan  | 6. Gyani         |
| 7. Adib  | 8. Adib Alam   | 9. Adib Fazil    |
| 10. Munshi   | 11. Munshi Alam  | 12. Munshi Fazil |
| 13. Maulvi   | 14. Maulvi Alam  | 15. Maulvi Fazil |
| 16. Prajna   | 17. Visharad   | 18. Shastri      |
| 19 Diploma of Acharya in Sanskrit Language and Litt.   | 20. Pre-University (Humanities, Science, Commerce, Fine Arts and Agr. groups). |                  |
| 21. Pre-Medical Pre-Engineering.   | 22. B.A./B.Sc. (T.D.C.) Pt.-I  |                  |
| 23. B.A./B.Sc. (T.D.C.) Pt.II.   | 24. B.A./B.Sc. (T.D.C.) Pt.III.  |                  |
| 25. B.Com. Part I, II and III.   | 26. First, Second, Third & Final examinations in Agriculture.                  |                  |
| 27. B.Sc. (Hons.School) Preliminary and subsidiary examinations in Chemistry.                                    | 28. M.A. Pt.I Psychology.  |                  |
| 29. M.A. Pt.I & II Examns. in English, Hindi, Panjabi, Pol.Sc., History, Econ., Mathematics, Sanskrit and Music. | 30. M.Sc. Agriculture, Horticulture, Econ., and Agronomy.                      |                  |

31. B.Ed. and M.Ed.
32. B.A. (Hons.) Pt. II & III  
Examns. in English,  
Maths., Geography,  
Econ., Panjabi, Pol. Sc.,  
History Sanskrit, Hindi  
& Phil.
33. M.D., M.S., M.B., B.S.,  
D.C.D., D.O.MS., D.C.H.,  
D.M.R., D.G.O., D.M.P.B.,  
D.L.O., Diploma in Pharmacy  
& Dresser's Course. Diploma  
in Anaesthes, Diploma in  
Dermatology, B.D.S. and  
M.D.S.

*Resolved to recommend as follows :*

- (I) The examinations At sl.Nos. 1 to 17 being not conducted by the University, the question of their recognition did not arise. However, as done in the case of the same examinations of the Punjab University, (a) the examinations at Sl. Nos. 3,12,15 and 18 viz., Prabhakar, Munshi Fazil, Maulvi Fazil and Shastri be recognised for purpose of appearance of candidates at the B.A. examination under O.167 of the University Hand Book Pt. II and (b) the examinations at Sl. Nos. 2,7, and 16 viz., Bhushan, Adib, and Prajna be recognised for purposes of Rule 31-A of 'Pre-University Examination Rules' of the University.
- (II) Since the University had instituted Shastri and Acharya Degree under the purview of the Faculty of Sanskrit Studies, a certification be sought from the Guru Nanak University as to whether the examinations mentioned at Sl.Nos. 18 & 19 were of the Degree and Post-Graduate degree standards respectively and a copy of the relevant Rules, Regulations and syllabi be obtained for scrutiny by the Dean whose opinion be then placed before the next meeting of Committee.
- (III) As regards the examinations at Sl. No. 21 the Pre-Medical examination may be recognised as a qualifying examination for purpose of admission to the M.B., B.S. course and as equi-

valent to the First Year T.D.C. (Sc.) examination of the University.

- (IV) The B.A., B.Sc. and B.Com. examinations (full and not in parts) be recognised as equivalent to the corresponding examinations of the University.
- (V) The B.Sc. (Ag.) examination (full and *not in parts*) be recognised as equivalent to the corresponding examination of the University.
- (VI) The B.Sc. (Hons. School) examination be recognised as equivalent to the B.Sc. (Hons.) examinations of the University.
- (VII) M.A. examination (in full and *not in parts*) be recognised as equivalent to the M.A. examination of the University.
- (VIII) M.Sc. (Agr). examination be recognised as equivalent to the corresponding examination of the University conducted till the year 1963.
- (IX) B.Ed. and M.Ed. examinations be recognised as equivalent to the corresponding examination of the University.
- (X) B.A. (Hons.) examination (in full and *not in parts*) be recognised as equivalent to the corresponding examination of the University.
- (XI) The above recommended recognitions be on *reciprocal basis* and provisional for two years pending scrutiny of the syllabi etc. by the Dean concerned.
- (XII) As regards the examinations in the Faculty of Medicine a reference be made to the Medical Council of India as to whether it had recognised the same, and then the matter be referred to the Dean of the Medical Faculty for his views for consideration of the Committee.

19. The Committee considered letter No. Misc./2565 dated the 11th February, 1970 from the Registrar, Punjab University, Chandigarh requesting to recognise their Higher Secondary Part I Examination as equivalent to the High School Examination of the University conducted till 1957.

In this connection it was reported to the Board that—  
(i) the Punjab University had equated its Matric examination with its Higher Secondary Part-I Examination so that a person passing the Higher Secondary Part I examination of the Punjab University was eligible for admission to all courses for which the minimum qualification was Matriculation and  
(ii) the Secretary, Board of Secondary Education, Rajasthan, Ajmer vide his letter dated 8.5.1970 informed this office that the Board had recognised the above examination as equivalent to its Secondary School Examination.

*Resolved to recommend* that the Higher Secondary Part I examination of the Punjab University be recognised as equivalent to the High School examination of the University conducted till 1957.

20. The Committee considered the following item No. 7 of the minutes of the U.G.C. Advisory Committee of Vice-Chancellors held on 3.12.1970 :

“To consider further the question of migration of students and recognition of degrees by the Universities.

The Committee endorsed the view of the Commission that a degree awarded by an Indian University should be automatically ‘recognised’ by other Universities in the country. It was noted that as regards admission of a student to a particular course, it was for a university to determine on the basis of the attainments of the candidates and the educational requirements for the course.”

*Resolved to recommend* that as already recommended by the Committee vide its Res. No. 3 dated 22nd February, 1967 and also in accordance with the Resolution adopted in this behalf by the Inter-University Board of India & Ceylon at its 35th annual meeting held at Baroda in 1959 (*reproduced below* the present practice in the matter of recognition of examinations of sister universities on reciprocal basis be continued :

*Resolution of the Board :*

“Resolved that the examinations of one university should be recognised by another on a reciprocal basis, provided that the entrance qualification, duration of course and the general standard of attainment are similar to those prescribed by the recognising University”.

21. The Committee considered the question of recognition of the B.Ed. and M.Ed. examination of the Gujrat University Ahmedabad, together the views expressed by the Dean, Faculty of Education as contained in his letter No. 21196 dated the 12th January, 1971 to the effect that the B.Ed. and M.Ed. examinations of the above University be recognised as equivalent to the corresponding examinations of the University.

*Resolved to recommend* that the Dean's advice be accepted and recognition granted accordingly, *on reciprocal basis.*

22. It was reported to the Committee that the Vice-Chancellor vide his orders dated 9.10.1970 granted provisional recognition to the Matric and Higher Secondary Part I and II examinations conducted by the three newly set-up Boards viz., (i) Board of School Examination, Punjab (ii) Board of School Education, Haryana and (3) Board of School Education for the Union Territories of Chandigarh and Himachal Pradesh, for two years.

In this connection it was further reported to the Committee that on a reference made to the Board of Secondary Education, Rajasthan Ajmer, the Secretary of the Board vide his letter No. 27/131/5192 dated 22.2.1971 informed this office that the Board had accorded recognition to the said examinations as follows :

Name of the examinations of the Board of School Education Haryana/ Himachal/Pradesh/Panjab.	Name of the examinations of the Board of Secondary Education, Rajasthan, Ajmer.
1. Matriculation Examination (if passed with at least 5 subjects).	Secondary School Examination.
2. Higher Secondary Examination Part-I	Secondary School Examination.
3. Higher Secondary Examination Part-II	Higher Secondary Examination.

*Resolved to recommend* that the Matriculation examination (if passed with at least 5 subjects) and the Second-

ary School Examination of the aforesaid Boards be recognised as equivalent to the High School Examination of the University conducted till the year 1957 and (ii) the Higher Secondary Pt. II examination of the said Boards be recognised as equivalent to the Pre-University Examination of the University and (iii) the Vice-chancellor's orders referred to above be confirmed.

23. It was reported to the committee that on the recommendation of the Faculty of Ayurveda, the Academic council vide its Res. No. 24 (I) (A) passed at its meeting held on 13/15th Feb., 1971 resolved that the degree of Ayurveda-lankar awarded by the Gurukul Kangri Vishwavidyalaya be treated as equivalent to the Ayurvedacharya degree of the University.

*Resolved that above report be recorded.*

24. It was reported to the committee that the Vice-chancellor vide his orders dated 23-11-1970 allowed admission to Shri Ram Singh Verma to the 1st Year T.D.C. (Arts) class at the S.S.G. Pareek college, Jaipur on the basis of his having passed the Pre-Professional Agriculture examination from the Udaipur University.

In this connection the Committee considered (i) the views expressed by the Deans of the Faculties of Arts & Science as contained in their letter Nos. 497 date 17.1.1970 & 13058/70 dated 21-11-70 respectively to the effect that the candidates passing the Pre-Professional (Agr.) Examination from the Udaipur University be deemed eligible for admission to the First Year T.D.C. class of the University and (ii) a letter dated 12th October, 1970 from the Registrar, Udaipur University informing that the candidates passing the P.P. (Agr.) examination of the said University were deemed eligible for admission to the First Year T.D.C. class of that University.

*Resolved to recommend* that (i) the Vice-Chancellor's orders referred to above be confirmed and (ii) the Pre-Professional (Agr.) Examination of the Udaipur University be recognised for purposes of admission to the First Year T.D.C. class of the University in the Faculties of Arts, Science and commerce.

25. It was reported to the committee that (i) the Vice-chancellor vide his orders dated 4th December, 1970 allowed

two candidates viz., Shri F. Abbas Khoathair and Shri Abdul Hadi Ali to continue in the Ist Year T.D.C. (Sc.) class in Lal Bahadur Shastri College and Agrawal college, Jaipur respectively who had passed the Baccalaureate Examination for Secondary School, Iraq, Baghdad, which had not so far been recognised by the University and (ii) a reference was made to the Dean, Faculty of Science in the matter and after examining the syllabi of the said examination he, vide his letter dated 28.11.1970 expressed the view that the standard of the examination was much higher and, therefore, there could be no objection to the admission of the two candidates passing the said examination to the First Year T.D.C. courses of the University.

*Resolved to recommend* (i) the Vice-Chancellor's orders referred to above be confirmed, (ii) the Baccalaureate Examination for Secondary School conducted by the Republic of Iraq, Ministry of Education, Baghdad be recognised provisionally for two years for purposes of admission to the First Year T.D.C. course of University pending necessary enquiries from the Board of Secondary Education, Rajasthan and (iii) a letter be addressed to the Principals of the Lal Bahadur Shastri College and Agarwal College, Jaipur enjoining upon them that no provisional admission be made in future without prior permission of the Vice-Chancellor and that only such candidates be admitted as have passed the qualifying examination already recognised by the University for the purpose.

26. The Committee considered letter No. EV./II/(125)/69/31714-787 dated the 4th March, 1970 from the Secretary, Inter-University Board of India & Ceylon, New Delhi intimating for information and necessary action the following resolution adopted by the Standing Committee of the Board at its meeting held on 7.10.1970.

“Resolved that the Certificate attesting passing of the I.A.F. Educational Test conducted by the Directorate of Education, Air Headquarters, New Delhi for promotion to the rank of Corporal be recognised as equivalent to the Higher Secondary Examination of a recognised Board or a Pre-University Examination of an Indian University.”

*Resolved to recommend* that the Certificate attesting passing of the I.A.F. Educational Test conducted by the Dire-



ctorate of Education Air Headquarters, New Delhi for promotion to the rank of Corporal be recognised as equivalent to the Pre-University examination of the University.

27. With reference to the Equivalence Committee Res. No. 16 dated the 12th Feb., 1970 to the effect that in future the proposal for recognition of examinations of other universities Agencies be first referred to the Conveners of the Board of Studies in the subjects concerned and then with the opinion of the Conveners to the Deans of the Faculties concerned for giving their over all view for consideration of the Committee, it was *reported to the Committee* that the Vice-Chancellor passed orders on 29th December, 1970 to the effect that the same procedure for referring the proposals for recognition of examinations of other Universities/Agencies be followed as was in vogue prior to the above resolution i.e. to refer such proposals to the Dean of the Faculty concerned.

*Resolved that* the Vice-Chancellor's orders referred to above be confirmed.

28. The Committee considered letter No. Admn. 50/1970/74 dated 27.2.1970 from the Registrar, Awadhesh Pratap Singh University, Rewa requesting to recognise the LL.M. and the B.Lib.Sc. examinations of the said University as equivalent to the corresponding examinations of the University.

In this connection it was reported to the Committee that the Dean, Faculty of Education had expressed his view that the B.Lib.Sc. examination of the said University could be recognised as equivalent to the corresponding examinations of the University, (ii) the LL.B. examination of the said University was recognised provisionally and (iii) the views of the Dean, Faculty of Law in respect of the LL.B. and LL.M. examinations had not yet been finalised.

*Resolved to recommend that* (i) the B.Lib.Sc. examination of the A.P. Singh University, Rewa be recognised as equivalent to the corresponding examination of the University, on *reciprocal basis* and (ii) the consideration of the question of recognising LL.B. and LL.M. examinations of the University be *postponed* pending receipt of the view of the Dean.

29. The Committee considered letter No. 244/Sc.70-71

dated the 16th December, 1970 received from the Principal, Sophia College, Ajmer requesting to recognise the L.Ph. degree of the Pontefical Athenaum, Poona as equivalent to the Bachelor's Degree for the purpose of admission to the M.A. (Prev.) class.

In this connection it was reported to the Committee that :

- (1) The L.Ph. examination of the said institution already stood recognised by the University as equivalent to the Intermediate examination for purpose of admission to the degree course.
- (2) A reference was made to the Inter-University Board of India & Ceylon and some sister Univrsties in the matter. It was revealed from the replies received that neither the I.U.B. nor the Universities of Vikram, Punjab, Allahabad, Agra, Calcutta and Jadavpur University, Calcutta at all recognised this examination. The Universities of Kerala and Madras recognised this examination as equivalent to Pre-University and Delhi and Baroda Universities considered the eligibility on individval's merit. Only one University i.e. Karnatak University, Dharwar recognised it as equivalent to its B.A. degree.
- (3) The Statutes, Rules and up to date Syllabus of L.Ph. degree were sent to the Dean, Faculty of Arts for his opinton but the same had not been received so far.

*Resolved that consideration be postponed pending receipt of view from the Dean, Faculty of Arts.*

At this stage the Vice-Chancellor left the meeting for an important work and requested Prof. G.C. Pande to preside over the meeting.

30. The Committtee considered the question of recognition of the various examinations of the following organisation for purposes of admission to the higher courses of study in the University, together with the opinion of the Dean, Faculty of Arts as contaied in his letter No. 1453 dated the 22nd March, 1971.

Name of the Institution	Name of the Examination conducted by them.
(1) Hindi Vidyapeeth, Deoghar (Bihar) Teaching & Examining Body.	(i) Praveshika (ii) Sahitya Bhushan (iii) Sahityalankar.
(2) Rajasthan Sahitya Sammelan, Bikaner (Examining Body)	(i) Praveshika (ii) Visharad (iii) Sahityaratan
(3) Jamia Millia Islamia, New Delhi.	B.A. Hons. degree in Hindi Pol. Sc. Econ. & History.

*Resolved to recommend* that (i) the examination of Hindi Vidyapeeth, Deoghar (Bihar) and Rajasthan Sahitya Sammelan, Bikaner be not recognised and (ii) the B.A. Hons. Examination of the Jamia Millia Islamia, New Delhi be recognised as equivalent to the corresponding examination of the University, *on reciprocal basis*.

31. The committee considered the question of recognition of the B.A., M.A., M.Com. and LL.B. examination of the Sambalpur University, Sambalpur on permanent basis (which are provisionally recognised at present), together with the views expressed by the Deans of the Faculties concerned in each case.

*Resolved to recommend* as follows :

- (I) The provisional recognition of the B.A. examination of the Sambalpur University be continued for two years and meanwhile the additional information in regard to the Ordinances, Rules & Regulations for the examination as desired by the Dean be obtained and the matter placed before the Committee again together with the views of the Dean.
- (II) As recommended by the Deans concerned, the M.A., M.Com, and LL.B. (three year course)

examinations of the Sambalpur University be given permanent recognition equivalent to the corresponding examinations of the University, *on reciprocal basis*.

32. The Committee considered letter No. nil dated the 12th February, 1971 from the Secretary for International student Affairs, Vrije Universiteit (Free University) Amsterdam-ZII requesting to recognise the Kandidaats Examen in Geology of the said University.

In this connection it was reported to the Committee that (i) the Foreign Students Adviser of the University whose remarks were obtained in the matter, vide her letter No. Fsa. 5-351 dated 10th March, 1971 stated that the aforesaid examination could be recognised as equivalent to the B.Sc. degree looking at the number of years one was required to study and the type of courses and suggested that the Royal Netherlands Embassy at New Delhi (6/50F, Shantipath, Chanakyapuri) might be contacted if a more official statement was required and (ii) two foreign students viz., Mr. Johannes Bronkhorst and Mr. Hinkinus Nyenhuis possessing the said qualification were granted admission to the Certificate/Diploma Course in Sanskrit under the relevant Ordinance of eligibility for that course treating the said qualification as equivalent to the Pre-University examination.

Resolved that—(i) the admission of the two foreign students referred to above to the Certificate/Diploma Course in Sanskrit be confirmed as a special case and (ii) the question of determining equivalence of Kandidaats examination of the Vrije Universiteit Amsterdam-ZII be referred to the Convener, B.O.S. in Geology and then together with his opinion to the Dean, Faculty of Science for views.

33. The Committee considered letter No. F. 37 (i) A—4/71/1120 dated 26th February, 1971 from the Registrar, Jiwa-ji University, Gwalior requesting to recognise B.P.E. and M.P.E. degree of the said University for purpose of (i) appointments as Director of Physical Education or Physical Instructors in the University/College and (ii) admission in Post-graduate course in Humanities.

In this connection the Committee noted that the holders of B.P.E. & M.P.E. degree from the Maharani Lakshmi Bai College of Physical Education, Gwalior were already considered by this University as eligible for appointment to the post of Director of Physical Education or Physical Instructors in the Univer-

sity and its affiliated colleges, and as regards admission of the above degree holders to post-graduate Courses in Humanities, copies of the syllabuses of the said examinations had been sent to the Dean, Faculty of Arts for his opinion which was awaited.

*Resolved that* consideration of the question of recognising the B.P.E. and M.P.E. degree of the Jiwaji University, Gwalior for purpose of admission to post-graduate courses in Humanities be *postponed* pending receipt of the opinion of the Dean, and meanwhile an interim reply about the position as stated above be sent to the Registrar, Jiwaji University, Gwalior.

34. It was reported to the Committee that the Vice-Chancellor vide his orders dated 31.3.71 allowed admission of a candidate Shri Sagar Singh Yadav to the B.Ed. (Ag.) class at the Regional College of Education, Ajmer on the basis of his having passed the B.Sc. (Hons.) Ag. & A.H., Examination from the U P. Agricultural University, Pantnagar pending recognition of the said examination by the University.

In this connection it was further reported to the Committee that with view to enabling the Equivalence Committee to consider the question of determining equivalence of the aforesaid examination, necessary literature had been called for from the Registrar of the said University which was received a few days ago and was forwarded to the Dean, Faculty of Science for Scrutiny and views.

*Resolved that* (i) the Vice-Chancellor's orders referred to above be confirmed and (ii) the question of determining equivalence of the aforesaid examination be placed before the Committee at its next meeting together with the views of the Dean.

35. The Committee considered the question of recognising M.S.E. degree of the Florida University as equivalent to the M.A. degree of the University for purpose of registration for Ph.D. degree, together with the views expressed by the Convener, B.O.S. in Engineering favouring the proposal.

*Resolved to recommend* that the M.S.E. degree of the Florida University be recognised as equivalent to the M.E. degree of the University.

36. The Committee considered the question of recognising the M.Sc. (Engineering) degree of the London Univer-

sity as equivalent to the M.E. degree of the University for Ph.D. registrar, together with the views expressed by the Convener, B.O.S. in Engineering favouring the proposal.

*Resolved to recommend* that the M.Sc. (Engineering) degree of the London University be recognised as equivalent to the M E. degree of the University.

The meeting ended with a vote of thanks to the Chair.

Sd/-P.L. Bhatnagar

*Chairman*

Sd/-J.N. Mathur

*Dy. Registrar*

## APPENDIX IX

(Ref :—Res. No. 28 of A. C. C. dated 23rd April 71.)

Minutes of the meeting of Committee appointed by the Academic Council vide its Resolution No. 23, dated 21.4.70 held on the 18th September, 1970 at the University Office.

The following members were present :

1. Shri L. L. Joshi
2. Prof. Sarnam Singh Sharma
3. Prof. P. L. Bhargava
4. Prof. R. C. Mehrotra (Convener)

The Committee examined the list of Hindi equivalents of the English names of the University Degrees and Diplomas as suggested by the Commission for Scientific and Technical Terminology and resolved to recommend as under:—

1. That the Hindi equivalents as suggested by the Commission may be adopted, and
2. The English names be also given after Hindi equivalents till such period, the Hindi equivalents are not publicly known

Sd/—

R. C. Mehrotra  
Convener

*Ref : Res. No. 31 of the Academic Council dated 23rd April, 71*

Minutes of the Second Meeting of the Committee, appointed by the Academic Council, vide its Resolution No. 23, dated the 21st April, 1970, held on the 17th March, 1971 at the University office.

The following members were present :

1. Prof. Sarnam Singh Sharma
2. Prof. P. L. Bhargava
3. Prof. R. C. Mehrotra (Convener)

1. The Committee resolved to recommend that the Hindi equivalents of the English names of the degrees and diplomas, suggested by the Commission for Scientific and Technical Terminology and approved by the University Grants Commission, be adopted, as far as possible. The Hindi equivalents adopted by the Commission and approved by the Committee are listed in Annexure I.

2. The Committee also suggested Hindi equivalents to the names of such degrees/diplomas as are awarded by the University, but are not included in the list supplied by the University Grants Commission, vide Appendix II. It also resolved to recommend that these Hindi equivalents be forwarded to the U.G.C. and it be requested to accord its approval for their adoption.

3. The Committee in respect of the following names of the University degrees did not agree to the Hindi equivalents as suggested by the Commission. In their stead, it suggested Hindi equivalents as noted against each :

Name of the degree/ diploma	Hindi equivalent as suggested by the Commission.	Hindi equivalent as suggested by the Committee.
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1. M. D.	आयुर्विज्ञान वाचस्पति	आयुर्विज्ञान निष्णात
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The changes as suggested vide Resolution No. 3, be communicated to the U.G.C. and its approval be obtained. It also resolved that the U. G. C. be requested to take steps for uniform adoption of Hindi equivalents by all Universities in India, as far as possible.

Sd/—  
R. C. Mehrotra  
(Convener)



## ANNEXURE I

The Hindi equivalents as suggested by the Commission for Scientific and Technical Terminology and approved by the Committee for adoption.

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S. No.	Name of Degree/Diploma	Hindi Equivalents
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1. D. Litt.	साहित्य वारिधि
2. Ph. D.	त्रिदया वाचस्पति
3. M. A.	कला-निष्णात
4. M. O. L.	प्राच्यविद्या-निष्णात
5. M. Sc.	विज्ञान-निष्णात
6. M. Com.	वाणिज्य-निष्णात
7. Master of Business Administration.	व्यवसाय-प्रबन्ध-निष्णात
8. B. A.	कला-स्नातक
9. B. Sc.	विज्ञान-स्नातक
10. B. Com.	वाणिज्य-स्नातक
11. M. B., B. S.	आयुर्विज्ञान शल्य विज्ञान-स्नातक
12. M. S.	शल्य विज्ञान-निष्णात
13. B. Sc. Nursing	परिचर्या स्नातक
14. M. Pharmacy	भेषजी-निष्णात
15. LL. M.	विवि-निष्णात
16. LL. B.	विवि-स्नातक
17. M. Ed.	शिक्षा-निष्णात
18. B. Ed.	शिक्षा-स्नातक
19. M. E.	अभियांत्रिकी-निष्णात
20. B. E.	अभियांत्रिकी-स्नातक
21. Diploma in Ophthalmic Medicine and Surgery )	उपाधि-पत्र नेत्र औषध एवं शल्य चिकित्सा

## ANNEXURE II

The Hindi equivalents of the names of degrees/diplomas as are awarded by the University, but are not included in the list supplied by the University Grants Commission.

S.No.	Name of Degree/Diploma	Hindi Equivalents
1.	M. Sc. Tech. Applied Geology	आद्योगिकी विज्ञान-निष्णात (प्रयोगिक भूगर्भ विज्ञान)
2.	Post M.A. Diploma in International Affairs-	निष्णातोत्तर उपाधि-पत्र अन्तर्राष्ट्रीय विषय
3.	Diploma in Indian Culture-	उपाधि पत्र भारतीय संस्कृति
4.	Diploma in Adult Education-	उपाधि पत्र प्रौढ़ शिक्षा
5.	Diploma in Cost and Works Accountancy.	उपाधि पत्र परिव्यय एवं क्रमन्ति लेखा
6.	Diploma in Banking and Finance	उपाधि पत्र अचिकोपण एवं वित्त
7.	Post M. A. Diploma in Linguistics	निष्णातोत्तर उपाधि पत्र भाषा विज्ञान
8.	B.A (Honours)	कला स्नातक (सम्मान)
9.	B.Sc. (Honours)	विज्ञान स्नातक (सम्मान)
10.	B.Sc. (Agriculture)	विज्ञान स्नातक (कृषि)
11.	B.Com. (Honours)	वाणिज्य स्नातक (सम्मान)
12.	M Sc. (Med.)	विज्ञान-निष्णात (आयुर्विज्ञान)
13.	Diploma in Tuberculosis and Chest Diseases.	उपाधि पत्र अय एवं वक्ष रोग चिकित्सा
14.	Diploma in Medical Radiology-Therapeutic	उपाधि पत्र-भेषज्य विकिरण चिकित्सा
15.	Diploma in Medical Radiology-Diagnostic	उपाधि पत्र भेषज्य विकिरण-निदान

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| 16. Diploma in Anaesthesiology                                     | उपाधि पत्र निश्चेतनीकरण विज्ञान                                |
| 17. Diploma in Clinical Pathology-                                 | उपाधि पत्र लाक्षणिक विहृति विज्ञान                             |
| 18. LL B. (Professional)   | विधि स्नातक (व्यवसायिक)  |
| 19. LL.B. (Academic)-  | विधि स्नातक (शैक्षणिक)   |
| 20. Diploma in Labour Law, Labour Welfare and Personnel Management | उपाधि-पत्र-श्रम विधि, श्रम कल्याण एवं कर्मों प्रबन्ध           |
| 21. Diploma in Criminology and Criminal Admn.                      | उपाधि पत्र-अपराध विज्ञान एवं अपराध प्रशासन                     |
| 22. Diploma in Legislative Research Drafting                       | उपाधि पत्र विधायी अनुसंधान एवं द्राफ्टिंग                      |
| 23. B.Ed. (Agriculture)  | शिक्षा स्नातक (कृषि)   |
| 24. B.Ed. (Commerce)   | शिक्षा स्नातक (वाणिज्य)  |
| 25. B.Ed. (Science)  | शिक्षा स्नातक (विज्ञान)  |
| 26. B.Ed. (Home Science)   | शिक्षा स्नातक (गृह विज्ञान)                                    |
| 27. B.Ed. (Craft)  | शिक्षा स्नातक (शिल्प)  |
| 28. B.Tech.Ed.   | औद्योगिकी स्नातक (शिक्षा)                                      |
| 29. B.Ed. (Summer-School-cum - Correspondence Course)              | शिक्षा-स्नातक (ग्रीष्म कालीन प्रशिक्षण एवं पत्राचार पाठ्यक्रम) |
| 30. Diploma in Industrial Craft Education.                         | उपाधि-पत्र औद्योगिक शिल्प शिक्षा                               |
| 31. Diploma in Foreign Languages.                                  | उपाधि पत्र विदेशी भाषा   |
| 32. Bachelor of Library Science.                                   | पुस्तकालय विज्ञान स्नातक                                       |
| 33. B.Ed. Languages  | शिक्षा स्नातक (भाषा)   |
| 34. B.Sc., B.Ed ,  | विज्ञान स्नातक एवं शिक्षा स्नातक                               |

## APPENDIX—X

(Ref :- Res. No. 29 of A.C.C. dated 23rd April, 1971)

Minutes of the Meeting of the Research Board held on the 21st April, 1971, in the University Office at 10 A.M.

### Present

Prof. P.L. Bhatnagar—Vice-Chancellor  
*in the chair.*

2. Dr. B.N. Consul.
  3. Prof. B. Tyagi.
  4. Prof. D. Kumar.
  5. Prof. G.C. Patni.
  6. Dr. Indra Pal.
  7. Prof. J.N. Gaur.
  8. Dr. M.C. Singhal.
  9. Prof. Om Prakash.
  10. Prof. P.L. Bhargava.
  11. Prof. R.G. Sarien.
  12. Prof. R.C. Mahrotra.
  13. Prof. S.P. Varma.
  14. Prof. Sarnam Singh Sharma.
  15. Prof. S. Loknathan.
  16. Prof. T.K.N. Unnithan.
  17. Prof. Ziauddin Khan.
- Shri V.D. Qamra, Dy. Registrar (Exams.)

1. The minutes of the meeting of the Research Board held on the 21st Nov., 1970 were confirmed.

2. With reference to its resolution No. 15, dated the 10th April, 1970, resolving that the four copies of an approved Ph.D. thesis be disposed in the following manner, the Board considered the proposal made by Shri J.P. Naik, Member Secretary, Indian Council of Social Science Research, as contained in his letter No. F-3-1/70-RIB, dated the 22nd Feb., 1971, to the effect that the Council might be provided

with a copy each of the approved Ph.D. theses in the field of Social Sciences :—

- (i) One copy to the Central Library.
- (ii) One copy to the Departmental Library.
- (iii) One copy to the supervisor.
- (iv) One copy to the candidate.

*Resolved to recommend* that in the case of subjects under Social Sciences, as defined by the Indian Council of Social Science Research, one copy of the thesis may be sent to the Council instead of returning it to the candidate.

3. The Board considered letter No Nil, received from the working President, Institute of Higher Studies and Research, Jaipur, requesting to recognise the Institute as an approved institution of the University and appointed a Committee consisting of the following persons to examine the matter :—

1. Dr. S.P. Varma (Convener)
2. Dr. G.C. Pande
3. Dr. T.K.N. Unnithan
4. Dr. Sarnam Singh Sharma

4. With reference to its resolution No. 7, dated the 5th Nov., 1966, resolving that the cases of all retired persons to continue to guide research scholars be placed before the Research Board for consideration, the Board considered whether Shri P.C. Jain, Retd. Principal, B.V. College of Arts and Science, Banasthali, may be allowed to register fresh candidates under his guidance.

*Resolved to recommend* that (a) Shri Jain may continue to guide candidates already registered with him, (b) question of allowing fresh candidates to be registered under him be considered when a decision on the question of recognition of the institute, vide resolution No. 3 above has been taken and (c) for the time being, the rule of joint-supervision be applied.

5. The Board considered the application of Shri B.P. Srivastava, Lecturer, University Department of Political Science, for registration as a Ph.D. candidate of the Univer-

sity on the subject "Some aspects of Barker's Philosophy", under the guidance of Prof. Iqbal Narain.

In this connection it was reported that :—

- (i) Shri Srivastava was earlier enrolled as a Ph.D. candidate on the same subject at Allahabad University.
- (ii) When he submitted his thesis he was asked to revise and resubmit the same.
- (iii) He could not submit the revised thesis within the stipulated time and according to the rules of the Allahabad University, he can not submit his thesis there now.
- (iv) His ex-supervisor, Dr. A.B. Lal, Vice-Chancellor, Allahabad University, had given a certificate denoting the above facts and had added that he would have no objection if the candidate was registered with the Rajasthan University, under the guidance of Prof. Iqbal Narain.

*Resolved to recommend* that (i) the report be recorded and (ii) since Shri Srivastava is a member of the staff of the University, he may be registered for the Ph.D. degree of the University as a fresh candidate and when he submits his thesis, the supervisor must certify that it is a fresh thesis.

6. The Board considered the application of Shri Navin, Chandra Singhal (M.Sc. Physics), for registration as a Ph.D.-candidate on the subject "Effects of local and surface irradiation on the physiology of certain organs in animals" under the joint-supervision of Dr. B.L. Saraf, University Professor of Physics, Dr. M.L. Gupta, Professor and Head of the Deptt. of Physiology and Biochemistry, S.M.S. Medical College, Jaipur and Dr. J.P. Udawat, Professor and Head of the Deptt. of Radiology, S.M.S. Medical College, Jaipur.

*Resolved to recommend* that (i) in view of the interdisciplinary nature of the problem of research the candidate may be allowed to be registered under the joint-supervision of the three persons as a special case, with the condition that Dr. B.L. Saraf will act as the supervisor and the remaining two as joint-supervisors.

7. The Board considered the application of (Mrs.) Bharti Sharma, for registration as a Ph.D. candidate on the subject "Developing a training model for Social Welfare Education workers", under the guidance of Shri U.S. Gour, Head of the Deptt. of Adult Education, with Dr. M.B. Buch, Professor and Head, Centre for Advanced Study in Education, M.S. University, Baroda, as the joint-supervisor.

In this connection the Board also considered the letter No. 1123/Research, dated the 20th March, 1971, received from the supervisor, Shri U.S. Gour, recommending that the candidate may be exempted from qualifying in four papers of M.Ed. examination as required under 0. 124 (4).

*Resolved to recommend* that since the candidate was qualified for registration as a Ph.D. candidate under the Faculty of Arts, she may be registered in the Faculty of Education, under the guidance of Shri Gour, provided that she agrees to qualify in the four papers of M.Ed. before submitting her thesis as per 0. 124 (4).

8. The Board *allowed* registration of (Miss) Shashi Bala Arora as a Ph.D. candidate of the University on the subject "Evaluation of natural and induced variability of nutritional quality of pulses", under the guidance of Dr. B. Tyagi, Professor and Head of the University Deptt. of Botany, with Dr. A.K. Kaul, Geneticist, Indian Agricultural Research Institute, New Delhi, as the joint supervisor.

9. The registrar reported :—

- (i) that a candidate after completing the maximum period of four years was re-registered on the 11th July, 1968.
- (ii) that according to the rules, this candidate was required to submit his thesis latest by the 10th July, 1970, which he had failed to do.
- (iii) that he had applied for registration for the third time on the same subject.
- (iv) that the supervisor had recommended that the candidate might be registered because the thesis was in the typing stage.

The Board considered the request of the candidate and *resolved to recommend* that since the thesis was in the typing stage, the candidate may be granted extension upto the end of June, 1971, for submission of his thesis, as a special case.

10. The Board considered the request made by Dr. S.C. Saxena, Reader, University Department of Zoology, for permission to guide M.Sc. (Agriculture) Entomology students for Ph.D. degree along with the opinion expressed by the Dean, Faculty of Science and *resolved to recommend* that the permission sought for be not granted.

11. With reference to its resolution No. 2, dated the 21st Nov., 1970, the Board *resolved to recommend* that 0.125 be modified so to read as follows :—

O. 125 (A)—All candidates for the degree of Ph.D. shall apply for registration in the beginning of any term of the academic year and shall, except in special cases approved by the Vice-Chancellor, work under the guidance of a supervisor approved by the University.

O. 125 (b)—Professors and Readers of the University Teaching Departments will be deemed *ipso facto* eligible for acting as research supervisors. In all other cases, permission to act as supervisors will be granted by the Research Board, after consulting the application made for the purpose. The following persons may be recognised as research supervisors :—

- (i) A Master's degree holder of at least ten year's standing with at least five year's of post-graduate teaching experience and with considerable amount of independent published research work of sufficiently high order which could be regarded as equivalent to Ph.D. research to his/her credit.
- (ii) A Doctorate degree holder of at least five years' standing with either post-graduate teaching experience of at least five years or research experience of at least five years in an approved institution and with considerable amount of independent published research work of sufficiently high order which could be regarded as equivalent to Ph. D. research, to his/her credit.
- (iii) An eminent scholar within the territorial jurisdiction of the University.



- (iv) In case adequate facilities for research for a particular subject are not available in the University, the Research Board may, on the recommendation of the Head of the Department concerned, permit as a special case, a candidate to choose a supervisor of eminence from outside the jurisdiction of the University to act as joint-supervisor; provided that the supervisor shall always be from within the jurisdiction of the University, who will act as one of the referees.

Notes :— (i) The evaluation of the quality of research work of an applicant under clauses (i) and (ii) above, shall be made by a Committee of three experts in the subject, to be appointed by the research Board.

- (ii) A fresh supervisor shall not be allowed to register under his supervision more than one candidate a year during the first three years.

*Resolved to recommend* further that the existing O.125 (b) be renumbered as O.125 (c) and the notes (i),(ii) and (iii) at the end of the Ordinance may remain as they are.

12. The Registrar reported that the examiners appointed to evaluate the thesis on the subject "prakrit Ram Kavya parampara", submitted by a candidate for the award of the degree of D. Litt. of the University, had unanimously recommended the award of the degree to the candidate and that a viva-voce examination of the candidate was to be held.

In this connection the Bord considered to authorise the Vice-Chancellor to place the matter directly before the Syndicate after the viva-voce examination of the candidate had been held to the satisfaction of the examiners and *resolved to recommend* that the Vice-Chancellor be authorised to place the matter directly before the Syndicate after the viva-voce examination of the candidate.

13. The Board considered to clarify the following points raised by Dr. Daya krishna, Professor and Head of the Deptt. of philosophy, as contained in his letter No. 2353, dated the 5th March, 1971, with regard to O. 124 (4):—

1. Is the candidate required to qualify all the four papers simultaneously or can he do so separately before he submits his thesis.
2. Has the candidate to appear as regular candidate and accordingly fulfil the required attendance of each paper.
3. As papers are to be of M.A. standard, will the student be given a certificate by the University to that effect. Also, will the student have the option of taking the other four papers later on and be allowed to take the full M.A. degree in the subject.

*Resolved to recommend that:—*

(i) O. 124(4) be modified so as to read as follows:—  
“No candidate will ordinarily be permitted to do research work for the degree of Ph.D. in a Faculty different from the one in which he/she has obtained his/her Master's degree. Permission to supplicate for the degree of Ph.D. in a different Faculty/subject, may be granted in special cases, on the recommendation of the Research Board, subject to the condition that such candidates shall be required to qualify in atleast four papers of the new subject, securing 36% marks in each paper separately. They shall be permitted to submit their thesis atleast one year after qualifying in these four papers. The papers to be offered by the candidate shall be specified by the supervisor with the approval of the Head of the Department of the new subject. Such candidates will get a certificate to the effect that they have passed only in these papers. All such students will be permitted to appear at the University examinations in the papers prescribed for them, as private candidates, on payment of usual examination fee.”

(ii) Candidates qualifying four papers of the Master's degree examination in a subject under this ordinance shall not be given the option to qualify in the remaining four papers in the subject for admission to the M.A./M.Sc./M.Com. degree in that subject.

14. The Board considered the request received from the Indian Academy of Philosophy, Calcutta, for recognising it as a research centre of the University and *resolved* that the recognition sought for be not accorded.

15. The Registrar reported:—

- (i) that a candidate registered for the degree of Ph. D. of the University on the subject. "स्वातंत्र्योत्तर हिन्दी उपन्यास साहित्य में नारी चरित्रांकन के विविध रूप" on the 2nd July, 1968, had requested for relaxation in the minimum time limit for submission of her thesis on the ground that she had to go to America to join her husband who was settled there.
- (ii) that on the recommendation of the supervisor, the Vice Chancellor was pleased to grant her the relaxation but while communicating the permission, it was intimated to the candidate through her supervisor, in unequivocal terms that if she left the country before a decision on the thesis was taken, it was to be at her own risk.
- (iii) that when steps for arranging the viva-voce examination, which was compulsory according to the rules, were taken, it was given to understand that she had already left the country.
- (iv) that the supervisor while informing that the candidate was not expected to come to India in near future, had recommended that either the candidate may be exempted from the viva-voce examination or the same may be held in America. He had suggested names of two scholars of Hindi, settled in America, one of whom could be appointed as examiner to conduct the viva-voce examination.

In this connection the Board considered whether out of the two persons suggested by the supervisor, one could be appointed to conduct the viva-voce examination of the candidate in America, and *resolved to recommend* that (i) none of the two names suggested by the supervisor was acceptable for the purpose and (ii) question of exempting from the viva-voce examination did not arise.

16. The Board *postponed* consideration of the following items:-

(a) applications of the following persons for recognition as research supervisor:-

1. Dr. M.M.Lavania, Head of the P.G. Deptt. of Sociology, Dayanand College, Ajmer.
2. Dr. L. N. Upadhayaya, Head of the P. G. Deptt. of Geography, Govt. College, Sriganganagar.
3. Dr. B. P. Bachlas, Lecturer, University Deptt. of Chemistry, Jaipur.
4. Dr. D. Gupta, Head of the P. G. Deptt. of Botany, Govt. College, Kota.
5. Dr. B. R. Luthra, Professor of Mathematics, Dungar College, Bikaner.
6. Dr. T. N. Bhardwaj, Lecturer in Botany, Govt. College, Ajmer.
7. Dr. S.C. Rajvanshi. Lecturer in Mathematics, M.R.E. College, Jaipur.
8. Dr. K. K. Saxena, Lecturer in Chemistry, M.R.E. College, Jaipur.
9. Dr. D. S. Yadava, Principal, Shri Jain P.G. College, Bikaner.
10. Dr. D.P. Gupta, Lecturer in Hindi, Dungar College, Bikaner.
11. Dr. D. N. Sharma, Lecturer, University Deptt. of Chemistry, Jaipur.
12. Shri R. S. Dangayach, Lecturer, Deptt. of Accountancy and Bus. Statistics, College of Commerce, Jaipur.

13. Dr. R.K.Mital, Lecturer, University Deptt. of Chemistry, Jaipur
14. Dr. Virendra Singh, Lecturer, University Deptt. of Hindi, Jaipur.
15. Shri P. K. Srivastava, Lecturer in Business Administration, College of Commerce, Jaipur.

(b) Application of Shri C. D. Sharma, Lecturer, University Department of Library Science, for registration as a Ph.D. candidate on the subject "Library Education in India", under the guidance of Shri U. S. Gour, Head of the Deptt. of Adult Education.

17. The following orders passed by the Vice-Chancellor were confirmed :—

- ( i ) orders dated the 17th Feb., 1971, allowing registration (under the old rules) of Shri Y.D. Gaur, as a Ph.D. candidate on the subject "Studies on root nodule Bacteria of Gram (Cicer Arietinum)", under the guidance of Dr. B. Tyagi, Professor and Head of the University Deptt. of Botany, with Dr. A. N. Sen, Microbiologist, I.A.R.I., New Delhi, as the joint-supervisor, as per Research Board resolution No. 2 dated the 21st Nov., 1970.
- (ii ) Orders dated the 29th Dec., 1970 recognising Prof. A.B. Mathur, Head of the Department of Political Science, Govt. College, Ajmer, as a research supervisor, as recommended by the Head of the University Teaching Deptt in the subject and the Dean, University Studies in Arts.

Before concluding, since this was to be the last meeting of the Board under the Chairmanship of Prof. P.L. Bhatnagar, the members expressed their deep sense of gratitude to him

for the efforts he has made to raise the standard of research in the University.

The meeting ended at 12.45 p.m. with a vote of thanks to the chair.

*Sd/— P. L. Bhatnagar*  
*(Vice-Chancellor)*

*Sd/— V. D. Qamra*  
*(Dy. Registrar, Exam.)*

## APPENDIX XI

(Ref. Reso. No. 34 of A.C.C. dated 23rd April 1971)

Minutes of the Meeting of a Committee constituted by the Academic Council vide its Resolution No. 48 dated 15-2-1971.

**Present**

1. Prof. R.C. Mehrotra (In the Chair)
2. Prof. G.C. Pande
3. Prof. Om Prakash
4. Prof. R.G. Sarien

Shri S.L. Ajmera, Dy. Registrar (A.F.&Estt).

The Committee considered the factual position with regard to the post of Director, Institute of Correspondence Studies, University of Rajasthan, Jaipur.

*Resolved to recommend that :*

- (i) There is no doubt that the post of Professor of Commerce was created for Correspondence Studies, subsequently called as Institute of Correspondence Studies by the Academic Council in May, 1968. The Academic Council had further requested the Syndicate to define the administrative designation of the post. The Syndicate did not appear to have directly determined the designation. The Academic Council also did not revise the designation of Professor of Commerce in the light of the departmentalisation in the Faculty of Commerce.
- (ii) Looking at the matter afresh, it is felt that the Institute of Correspondence Studies should be headed by a Director who ought to have the following minimum qualifications :—
  - (a) A First or Second class M.Com. Degree of an Indian University or an equivalent qualification of a foreign University in any of the subject in the Faculty of Commerce.
  - (b) Either a research degree of a doctorate standard or published work of a high standard, and
  - (c) Ten years' experience of teaching at a University or a college or ten years' post-doctoral res-

*earch experience and considerable independent published research work and some experience of guiding research.*

(iii) In addition to the above, he should preferably have the following qualifications :

(a) aptitude for lesson writing, review, assessment and other work connected with the Correspondence Studies.

(b) experience of educational administration.

(c) knowledge of Hindi.

(iv) Recruitment will be made by a Selection Committee constituted as follows :

(1) Vice-Chancellor

(2) Dean, Faculty of Commerce,

(3) One member of the Syndicate,

\* (4) Three experts belonging to one each of the discipline of Commerce,

(5) One expert having special knowledge of Correspondence Studies/Educational Administration.

\*To be nominated by the Syndicate.

(v) The person so selected and designated will not be assigned to any Teaching Department.

Sd/—R.C. Mehrotra



MINUTES OF THE MEETING OF THE SYNDICATE  
HELD ON FRIDAY, THE 14TH MAY, 1971 AT  
10.30 A.M. AT THE UNIVERSITY OFFICE,  
JAIPUR.

Present

Prof. P.L. Bhatnagar, Vice-Chancellor  
(*In the Chair*)

2. Dr. B.N. Consul
3. Shri D.C. Swami
4. Prof. G.S. Sharma
5. Dr. G. Narayanan
6. Shri K.C. Bakiwala
7. Dr. K.C. Khanna
8. Prof. K.L. Varma
9. Principal M.L. Agrawal
10. Principal M.L. Bhargava
11. Dr. M.P. Mathur
12. Principal P.N. Mathur
13. Principal (Mrs.) Rama Kochar
14. Principal S.C. Tela

Shri L.P. Vaish, Offg. Registrar

N.B. : Prof. G.C. Pande could not attend the  
meeting owing to his indisposition.

(a) Before proceeding with the business on the agenda  
the Syndicate adopted the following resolution :

“The Syndicate of the University of Rajasthan :

*has noted*, with deep concern and anxiety, the mass-  
acre of tens of thousand of human beings in Bangla  
Desh, involving the systematic killing of a large

number of Professors and students in the University of Dacca and at other academic centres in the country.

*places on record* its deep sense of anguish at the terrible sufferings ruthlessly inflicted day after day on the vast masses of humanity in Bangla Desh on account of the burning and plundering of entire villages and raping of their womenfolk,

*Expresses its* heartfelt sympathy and admiration for the valiant fight the heroic people of Bangla Desh are putting against military forces using modern weapons of mass killing, and

*urges upon* the Government of India—(a) to invoke international assistance through the United Nations and its Specialised Agencies for sending Red Cross and other help for the relief and rehabilitation of refugees incessantly pouring into the bordering Indian states and (b) to give immediate recognition to the duly constituted Government of Bangla Desh.”

(b) The Vice-Chancellor informed the Syndicate that (i) the Chancellor vide his letter No. 1398/PAS/Conf. dated 11.5.1971 had appointed Prof. A.B. Lal, Vice-Chancellor, Allahabad University as the next Vice-Chancellor of this University for a term of three years and (ii) an official notification to this effect had been issued by the University.

1. The minutes of the meeting of the Syndicate held on the 17th April, 1971 were confirmed with the following modifications.

(I) *Ref : Resolution No. 33 :*

Add the following paragraph at the end of the resolution :

“Resolved further that the recommendation of the Board of Inspection as contained in its

Resolution No. 10 for appointing an Inspection Committee in connection with the application of the Lal Bahadur Shastri College, Jaipur for LL.B. classes be not accepted in view of the Academic Council Resolution No. 39 dated the 21st April, 1970."

(II) *Ref : Resolution No. 42 :*

Delete 'full-stop' after 'accepted' and add—  
"and reported to the Finance Committee."

### (ESTABLISHMENT SECTION)

#### *Section 'A'*

2. With reference to its Resolution No. 3 dated the 10th March, 1971 granting one year's leave without pay to Shri Harsharan Singh, Director of Physical Education, University School of Commerce, the Syndicate considered the request of Shri Singh received through the Director, Univ. School of Commerce, Jaipur for converting his leave without pay into leave on full pay in view of the facts mentioned in his letter No. 1881 dated the 27th April, 1971.

*Resolved that* in view of the fact that in the past study leave had been granted to the Directors/Assistant Directors of Physical Education, and the question as to whether they be treated as teachers was still under consideration of the Academic Council, past practice be followed and Shri Singh be granted such study leave for one year as may be admissible to him according to the Study Leave Rules.

3. The Syndicate considered the request of Shri B.M. Agrawal, University Lecturer in Accountancy and Business Statistics, for the grant of study leave on full pay from 21-7-1971 to 20-12-1971 so as to enable him to complete his research work.

*Resolved that* the request of Shri Agrawal be acceded to.

4. The Syndicate considered the request of Shri R.B. Upadhyaya, University Lecturer in Business Administration, for the grant of leave on full pay from 1.8.1971 to 28.2.1972 so as to enable him to complete his research work.

*Resolved that* the request of Shri Upadhyaya be accered to.

5. With reference to its Resolution No. 2 dated the 28th September, 1970 granting extension in study leave on half pay to Shri C.S. Barla, University Lecturer in Economics upto 11-7-1971, the Syndicate considered another request of Shri Barla recommended by the Head of the University Department of Economics for the grant of extension in study leave on half pay for 6 months from 12.7.1971 to 11.1.1972 so as to enable him to finish his courses and to take Pre-Ph.D. Preliminary Examinations.

*Resolved that* the request of Shri Barla be not acceded to.

6. The Syndicate considered the request of Shri John, Henry Vincent, University Lecturer in English recommended by the Head of the University Department of English and the Dean, University Studies in Science for the grant of two years study leave w.e.f. 19.7.1971 with permission to prefix the summer vacation so as to enable him to get his admission to the M.A. Course in Teaching English as a Second Language at Teachers College, Columbia University, New York from where he could not get any financial assistance.

*Resolved that* study leave on full pay for one year w.e.f. 19.7.1971 with permission to prefix the summer vacation be granted to Shri Henry Vincent.

7. The Syndicate considered the request of Dr. J.M. Joshi, University Reader in Economics for the grant of about 10 months study leave on full pay w.e.f. 1st September, 1971 so as to enable him to avail of the scholarship offered to him by the USEFT, New Delhi for further study and to exempt him from the condition of executing any bond.

*Resolved that* (i) Dr. Joshi be granted ten months study leave on half pay w.e.f. 1st September, 1971 and (ii) his request for exempting him from the condition of executing the requisite bond be not acceded to and the past practice be followed.

8. The Syndicate considered the request of Dr. M.C. Vaish, University Lecturer in Economics recommended by the Head of the University Deptt. of Economics and the Dean, Univ. Studies in Arts for the grant of leave without pay for two years commencing from 1st July, 1971 to 30th June, 1973 so as to enable him to accept the offer of an assignment to teach Economics in the Department of Economics at the University of Liberia, Monrovia, Liberia (West Africa).

*Resolved that* the request of Dr. Vaish be not acceded to.

Arising out of the above the Syndicate *resolved that* for future the following procedure be adopted in connection with the processing of the requests of the University teachers for study leave.

- (I) Applications for Study Leave be considered twice a year only once in February/March and another time in September/October.
- (II) A committee consisting of the following be appointed to scrutinise the applications :
  - (i) Vice-Chancellor (Chairman)
  - (ii) Two members of the Syndicate (For the present Prof. K.L. Verma and Dr. B.N. Consul)
  - (iii) The concerning Dean of University Studies/  
Director, Univ. School of Law/Commerce.
- (III) The above Committee will make its recommendations to the Syndicate keeping in view the Rules, Regulations and the interest of the students and the University.

9. With reference to its Resolution No. 28 dated 14th August, 1970 approving re-employment of Dr. G.S. Satyendra

as Professor of Hindi for one year w.e.f. 1.9.1970, the Syndicate considered the recommendation made by the Head of the University Department of Hindi and the Dean, Univ. Studies in Arts for further extension in the term of re-employment of Dr. Satyendra as Professor of Hindi from 2.9.1971 to 30.6.1972 (Dr. Satyendra would be completing 65 years of age on 1.9.1972).

*Resolved that the term re-employment of Dr. Satyendra be extended upto 30th June, 1972.*

10. With reference to its Resolution No. 22 dated the 10th March, 1971 and Resolution No. 25 dated 17.4.1971, the Syndicate considered the following proposals of Prof. K.L. Varma, Member Syndicate, as contained in his letter No. 10 dated the 2nd February, 1971 :—

- (1) The Ordinances 376 F and F-1 be amended so as to read as follows :—

O.376F—“The date of compulsory retirement of a permanent whole time servant of the University is the day on which he/she attains the age of 62.”

The reasons for the proposal are :—

- (i) During the period of over 23 years ever since the inception of the University to the present day, there is not a single case to my knowledge, where recommendation for extension for two years in the first instance beyond the age of superannuation i.e. 60 has not been approved by the Syndicate. The existing Ordinance provides for an extension of not more than two years in the first instance after the date of compulsory retirement only in ‘very special circumstances’. The spirit of the Ordinance thus appears to have been lost sight of. In other words extensions have tended to become more or less a matter of routine.

- (ii) In a majority of cases the privilege of having such extensions will mostly be enjoyed by the 'higher ups' and not the 'lower-downs' in general.
  - (iii) Ends of justice and equity demand that extension by two years in the first instance should be enjoyed by one and all as has been the case with so many all these years as stated in (i).
- (2) O.376F-1 : Excellent teachers of exceptional merit may be re-employed for a further period of three years i.e. upto the age of 65 years provided that such a teacher is Physically quite fit and mentally quite alert.

Note : A special machinery for evaluation of 'excellence' and 'exceptional merits' will have to be laid down by the University. It will be on the basis of this evaluation that re-employment will be given. The reasons of re-employment will be given in full details in writing.

*Resolved that* the following Committee be appointed to examine the above proposal and report :

1. Principal P.N. Mathur (Convener)
2. Prof. G.S. Sharma
3. Prof. K.L. Varma

11. *Resolved that* the following minimum qualifications be prescribed for the newly created posts of (a) Instruments Supervisor and (b) Documentation Officer, as suggested by the Heads of the University Departments of Chemistry and Pol. Science respectively :

For Instruments Supervisor (pay scale Rs. 180-10-220-15-385-2)-425) in the University Department of Chemistry.

“B.Sc. having three year's experience of mainten-

ance/handling of scientific instruments to be used in Chemistry Laboratories."

*For Documentation Officer (Pay scale : Rs. 400-40-800 50-950) in the University Department of Pol. Science).*

"A first class Master's Degree in any of the Social Sciences, preferably in Political Science, of an Indian or foreign University, or a second class Master's Degree with degree in Library Science, and preferably a person with experience of documentation."

12. The Registrar reported receipt of letter dated the 27th March, 1971 from Shri C.M.Mathur University Legal Adviser informing the University that the learned Additional District Judge, Jaipur City had dismissed on 25th March, 1971 the civil suit filed by Shri B.D. Bhargava in the year 1966 against the University, Dr. M.S. Mehta, ex-Vice-Chancellor and Dr. Om Prakash for the declaration of his appointment as Director, Commerce College and setting aside the appointment of Dr. Om Prakash and granting permanent injunction.

*Resolved that the report be recorded.*

12-A. With reference to the Syndicate Resolution No.7 dated the 17th April, 1971 regarding the recommendations of the Selection Committee meeting held on 17.3.1971, for the appointment of Readers in University Department of Geology, the Vice-Chancellor informed in the meeting that he had addressed a letter to all the members of the Syndicate enclosing thereto copies of the letters of the Experts and enquired of them whether in the light of the opinion expressed by the experts, the Syndicate would still like the recommendations of the Selection Committee to be referred back or reconsider the recommendations of the Selection Committee.

*Resolved (by a majority of votes) that the recommendations of the aforesaid meeting of the Selection Committee held on 17th March, 1971 need not be referred back and the same be accepted (vide Appendix—A).*

13. The following orders of the Vice-Chancellor were reported to the Syndicate :



- (i) Orders dated 1.4.71 sanctioning house rent allowance to Shri Ramesh Chandra, Lecturer in Physics, Maharani's College as a special case with retrospecture effect viz., 1.9.1970 in relaxation of Rule No. 6 (iii) of the Rajasthan University House Rent Rules in view of the fact that land-lord of Shri Ramesh Chandra was out of station and he could not, therefore, submit the rent deed in time.
- (ii) Orders dated 4.2.1971 and 29.4.1971 appointing (a) Shri S.K. Goyal, Section Officer (Secrecy) as the Offg Asstt. Registrar against the additional Temporary post for Secrecy and (b) Shri D.P. Mathur, P.A. to Registrar, (Steno Gr.II) as Offg. Section Officer Secrecy Section vice Shri S.K. Goyal.

*Resolved that the aforesaid orders of the Vice-Chancellor be confirmed.*

### (EXAMINATION & SECRECY SECTIONS)

#### *Section 'A'*

14. *Resolved that as unanimously recommended by the Referees the degree of Ph.D. of the University be conferred upon the following candidates on the subjects noted against each :*

S.No.	Name	Subject
1.	Shri Sukh Deo Muni Purohit.	"Foreign Policy of Nepal 1951-66"
2.	Shri Brij Ballabh Sharma.	"हिन्दी नाटकों में अभिनव तत्व"
3.	(Mrs.) Veena Mathur.	"प्रसाद का सौन्दर्य दर्शन"
4.	(Miss) Sudha Gupta.	"छायावादोत्तर हिन्दी काव्य में शब्दार्थ"

- |                         |   |
|-------------------------|---|
| 5. (Miss) Pushpa Bajaj. | “Organic derivatives of Silicon.  |
| 5. Shri P.U. Verghese   | “Studies on the influence of light and temperature on the reproductive cycle of the Carp. <i>Cirrihina reba</i> (Ham.)” |
| 7. Shri Shyam Lal Verma | “The Board of Revenue for Rajasthan (an organisational and administrative study).”                                      |
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15. With reference to its Resolution No. 25 dated the 16th May, 1970 confirming the action of the Principal, Government College, Deedwana in rustivating for three years the four candidates who assaulted the invigilator Shri J.L. Swarankar, the Syndicate considered a further representation received from the following 3 candidates requesting to reduce the period of punishment:

1. Shri Harlal Singh
2. Shri Ram Chandra Jhakar
3. Shri Lala Ram.

In this connection it was reported to the Syndicate that (i) the aforesaid three candidates had given sureties from responsible persons that they would not take part in any violent and objectionable activities in future, (ii) the Principal Government College, Deedwana who was requested to offer his remarks in this behalf recommended that the case might be re-considered as the candidates had already undesone sufficient punishment and (iii) the fourth candidate Shri Mohinder Singh had not submitted any surety nor any undertaking so far.

*Resolved that* the period of restication in the case of the aforesaid three candidates who had given sureties and undertaking not to take part in any voilent and objectionable activities in future, be reduced by one year.

16. With reference to its Resolution No. 28 dated the 17th November, 1969 debarring a candidate Shri Rajendra Prasad Pareek (Roll No. 1867) for the T.D.C. Final Year Arts Examination, 1969 from appearing at any examination of the University to be held in 1970, 1971, 1972, 1973 and 1974 for using unfairmeans at the examination, the Syndicate considered a representation dated 6th February, 1971 from the candidate for re-consideration of the decision of the University in the light of the judgement of the Rajasthan High Court on the write petition filed by him.

*Resolved that* the period for which Shri Pareek had been debarred from appearing at any examination of the University be reduced and he be permitted to appear at the annual examination of the University in the year 1972.

17. The Registrar reported that—(i) a candidate bearing Roll No. 32 who appeared at the First M.B., B.S. Examination in February, 1971 resorted to the use of unfairmeans in the examination hall in Physiology Paper I and he admitted his fault, (ii) the examiner concerned to whom his answer-book was referred also intimated that the material found in the possession of the candidate was used by him (iii) according to the norms prescribed by the Syndicate the present examination of the candidate deserved to be cancelled and he deserved to be further debarred from appearing at any examination of the University for one subsequent examination and (iv) if the aforesaid punishment was given to the candidate and the examinations to be held during the period for which he was debarred were to be counted as attempts for the purpose of O.270 of the Univ. Hand Book Pt. II, he would not be eligible to prosecute further studies for the medical course.

*Resolved that* (i) the present examination of the candidate be cancelled and he be further debarred from appearing at the December, 1971 examination and (ii) he be permitted to appear at the January, 1972 examination in relaxation of the provisions of O.270 of the Univ. Hand Book Pt. II with regard to the attempts, as a special case.

18. The Syndicate *approved* the draft of the Pharmacists Diploma (duly approved by the Dean, Faculty of Medicine & Pharmaceutics) to be awarded to a candidate who passed the B. Pharmacy Part II Examination of the University in 1953 and has not completed the requisite practical training as per requirements of O.299 of the Univ. Hand Book Pt. II (*Vide Appendix—I*).

#### *Section 'B'*

19. The following orders of the Vice-Chancellor were reported to the Syndicate :—

“Orders dated 3rd May, 1971 fixing Monday the 16th August, 1971 for the commencement of the University Supplementary Examinations of 1971.”

*Resolved that* the aforesaid orders of the Vice-Chancellor be confirmed.

#### (ACADEMIC SECTION)

##### *Section 'A'*

20. The Syndicate considered the recommendations of the Academic Council made at its meeting held on 23rd April, 1971.

*Resolved that* the recommendations of the Council be approved with the following modifications/observations :

(I) *Ref : Resolution No. 1 :*

The word—‘LL.B.’ occurring at the end of the Resolution corrected as LL.M.’, it being a typographical error.

(II) *Ref : Resolution No. 7 (I) :*

The recommendation of the Faculty of Science to the effect that remuneration be paid to the Internal Examiners for practical examinations (right from the Pre-University upto the M.Sc. examinations) and the rate of payment be the same as for External Examiners, be *not* accepted (in this connection it was noted by the Syndicate that the financial implications of the proposal were estimated to a tune of Rs. 58,000/-approximately).

(III) *Ref : Resolution No. 7 and further reference to Resolution No. 1 of the Faculty of Science :*

It be *noted* and, subject to the availability of funds, efforts be made to follow the rule of treating three practical periods as equivalent to three theory periods.

(IV) *Ref : Resolution No.8 (VI) :*

Evaluation of answer-book be not permitted in the case of examinations in the Faculty of Engineering & Technology as the Faculty was *not* in favour of the same and consequently Note No. (4) occurring under para No. 1 of O.157—A be reworded as follows :

“(4) Re-evaluation shall not be permitted in respect of (a) the examinations in the Faculty of Engineering & Technology and (b) the scripts of practical examinations and disseration/thesis etc.”

(V) *Ref : Resolution No. 22 :*

The word—‘Evening’ be corrected as ‘coming’, it being a typographical error.

(VI) Ref : Resolution No. 24 :

The recommendation for relaxing the condition of securing a minimum percentage of marks at the qualifying examination for the purposes of admission to M.A., M.Sc. and M.Com. courses as laid down in Ordinances Nos. 211, 234 and 248 respectively, for the session 1971-72 be *not* accepted.

(VII) Ref : Resolution No. 34 :

The recommendation be accepted with the observation that the Director/Deputy Directors/ Assistant Directors in the Institute of Correspondence Studies will be treated to be belonging to the category of teachers.

21. With reference to its Resolution No. 36 dated the 17th April, 1971 deleting Note No. 3 occurring under O.141B, the Syndicate *approved* deletion of the following Note No. 7 also, occurring under O. 141C (in respect of the qualifications for University Teachers in the Faculty of Commerce) as a consequential amendment :

“Qualifications are relaxable at the discretion of the Selection Committee in special cases.”

22. With reference to its Resolution No. 25 dated the 1st July, 1969 and Resolution No. 37 dated the 14th August, 1970 appointing a Staff Welfare Committee, the Syndicate considered the following recommendations Nos. 4,5,6,8 and 9 of the Committee made at its meeting held on the 19th March, 1971 :

(4) सिंडीकेट से संस्तुति की जावे कि कम से कम 5 लाख रुपये की धन राशि से कर्मचारियों को भवन निर्माण हेतु ऋण देने के लिए एक फ्लोटिंग फण्ड स्थापित किया जावे । यदि बैंकों से क्लीन केज क्रेडिट नहीं उपलब्ध हो सके तो विश्वविद्यालय के रिजर्व फण्ड में से इस 5 लाख रुपये की धन राशि की व्यवस्था करवायी जावे ।

(5) समिति ने यह जानकारी प्रसन्नता प्रकट की कि सिंडीकेट ने सन् 1971-72 के बजट में 7 लाख रुपये की धन राशि का प्रावधान किया है जिससे कि विभिन्न वर्ग के कर्मचारियों के आवास के लिए क्वाटर्स बनाये जावेंगे ।

इस सम्बन्ध में समिति की यह राय है कि क्वाटर्स का निर्माण कर्मचारियों के पदों के वर्गीकरण के आधार पर न होकर उनके वेतन के आधार पर किया जावे और विश्वविद्यालय के वर्तमान तथा भविष्य में बनने वाले आवास ग्रहों का निम्न प्रकार से वर्गीकरण किया जावे जिस प्रकार कि राज्य सरकार में है :—

(क) “अ” टाईप क्वाटर्स— रु० 1000 अथवा उससे अधिक वेतन पाने वालों के लिए ।

(ख) “ब” टाईप क्वाटर्स— रु 500 से अधिक व 1000 रु० से कम वेतन पाने वालों के लिए

(ग) “स” टाईप क्वाटर्स— रु० 250 से अधिक व 500 रु० से कम वेतन पाने वालों के लिए ।

(घ) “द” टाईप क्वाटर्स— रु० 250 तक वेतन पाने वालों के लिए ।

इस सम्बन्ध में समिति ने यह भी संस्तुति की कि अब जो क्वाटर्स बनाये जाये वे उपरोक्त वर्गीकरण को ध्यान में रखते हुए बनाये जायें ।

समिति ने यह भी सुझाव दिया कि (क) वर्तमान आवास ग्रहों का ऊपर बतायी गई श्रेणियों के आधार पर वर्गीकरण कर दिया जावे (ख) ऊपर बनाए गए वेतन स्तरों में विश्वविद्यालय के कर्मचारियों की संख्या ज्ञात की जावे । (ग) इन दो सूचनाओं के आधार पर ये निर्णय लिया जावे कि किस वेतन वर्ग के कर्मचारियों के लिए कितने अतिरिक्त आवास ग्रहों का इस 7 लाख रुपये की धन राशि में से निर्माण होना चाहिए, यह ध्यान में रखते हुए कि कर्मचारियों की संख्या तथा आवास ग्रहों की संख्या में समानुपात रहें ।

ये भी संस्तुति की गई कि निम्नतम श्रेणी अर्थात् "द" टाईप क्वार्टर्स में भी रहने के लिए कम से कम दो कमरों की व्यवस्था की जावे ।

6. क्वार्टर्स के निर्माण तथा पुनर्वर्गीकरण की मिफारिश को ध्यान में रखते हुए संस्तुति की गई कि विज्ञान भवन के पीछे चतुर्थ श्रेणी कर्मचारियों क्वार्टर्स नं० 10 व 11 को विज्ञान भवन का स्टोर ही मान लिया जावे और उसको आवास ग्रहों की सूची से हटा दिया जावे ।

(8) सिंडीकेट से संस्तुति की जावे कि भविष्य में विश्वविद्यालय की सेवा में नियुक्ति किये जाने वाले कर्मचारियों के लिए जीवन बीमा कराना अनिवार्य किए जाने के प्रश्न पर विचार करें । समिति की राय में यह अति आवश्यक है ।

(9) वर्तमान कनवेयन्स एडवांस नियमों के अनुसार चतुर्थ श्रेणी कर्मचारियों को साईकिल खरीद करने हेतु, रु० 750 तक की वेतन पाने वालों को स्कूटर । मोटर साईकिल खरीद करने हेतु ऋण देने की व्यवस्था है । समिति की राय में यह छूट होनी चाहिए कि कनवेयन्स के निमित्त दिये गये ऋण की राशि को उपयोग में लाकर किसी भी प्रकार का कनवेयन्स कर्मचारी खरीद कर सके । इस संस्तुति को सिंडीकेट के समक्ष विचार करने हेतु रख दिया जावे ।

*Resolved as follows :*

(I) *Ref : Recommendation No. (4) :*

It be referred to the Finance Committee with the observation of the Syndicate that—(i) it was in favour of the setting up of a Floating Fund for giving building advance to the employees of the University in accordance with the House Building Advance Rules already approved by the Syndicate, (ii) a sum of Rs. 5 lacs for this purpose be transferred from the Reserve Fund and (iii) the rate of interest to be charged from the employees be half percent less than the Bank rate.



(II) *Ref : Recommendation No. (5) :*

Status-quo be maintained.

(III) *Ref : Recommendation No. (6) :*

The recommendation be not accepted and efforts be made to provide for separate Store rooms for the Vigyan Bhawan as and when funds are available for the purpose.

(IV) *Ref : Recommendation No. (8) :*

Consideration be postponed.

(V) *Ref : Recommendation No. (9) :*

The existing rules be followed and if there was any special case the same could be considered by the Syndicate on merits.

23. With reference to its Resolution No. 20 (i) dated the 1st February, 1971 approving the recommendations of the Sports Board with the observation that the Director of Education, Rajasthan be requested to fix up the order of holding Annual Inter-Collegiate Womens' Tournaments of the University, the Syndicate considered letter No. F. 25(5) Aca/DCE/71/530, dated 16.3.1971 from the Director of Education, Rajasthan Jaipur informing the University that this was the work of the Sports Board and that Principals could be contacted directly in the matter.

*Resolved that,* as agreed to by the Director of Education in the meeting, a list of Women's Colleges affiliated to the University be prepared in alphabetical order (according to the place where the college is located) and the Sports Board may allot Women's Tournaments to these colleges by rotation and the Director of Education, Rajasthan will ask the Principal of the College concerned to take up the activity.

24. With reference to its Resolution No. 33 dated the 17th April, 1971 to the effect that the same Inspection Comm-

tee (consisting of Dr. M.C. Singhal as Convener and Dr. I.B. Verma as Co-Inspector) be requested to inspect the S.S. G. Pareek Teachers' Training College, Jaipur once again, the Syndicate considered letter No. nil dated the 3rd May, 1971 from the Convening Inspector Dr. M.C. Singhal and letter dated 7th May, 1971 from the Co-Inspector Dr. I.B. Verma, regretting their inability to conduct the inspection of the college again.

*Resolved that* (a) the Inspection Report given by the aforesaid Inspection Committee be forwarded to the Administrator/Principal of the S.S.G. Pareek Teachers Training College, Jaipur immediately inviting their comments, if any, within two days' time. (b) after examining the comments the Vice-Chancellor may, if he thinks necessary, appoint a fact-finding Committee and (c) he be authorised to take a final decision on the dis-affiliation or otherwise of the college beyond the B.Ed. examination of 1971.

25. The Syndicate considered a letter dated 28th April, 1971 from the President, Gorakhram Rampratap Trust Institutions Local Managing Committee, Fatehpur addressed to the Director of Education, Rajasthan, Jaipur and a copy forwarded to the Registrar of the University informing him that—(i) the Trust had decided to close down Seth G.R. Chamria College, Fatehpur w.e.f. July, 1971 as the State Government had not fulfilled assurance in the matter of payment of grant-in-aid and not re-categorised the institution on 80% grant-in-aid level so that the Management found itself unable to run the institution any longer, and (ii) the management had served three months' notice on the members of the staff of the college for termination of their services w.e.f. 1st July, 1971 (two months notice and one months' salary to be paid).

In this connection the Syndicate noted that :

- (i) The College was provisionally affiliated to the University for the last 11 years for Pre-University and three years degree course in the Faculties of Science and Commerce.

- (ii) Statute 26 (8) of the University Hand Book Part-II provided that if at any time the Governing Body of a college might be unable to run the college it should inform the Syndicate at least one full academic year in advance and should give a notice of similar duration viz., one full academic year to the employees of the institution for termination of their services : provided that the closure of an institution should be in gradual stages in respect of each course of study for which it was affiliated, starting from the first year of the course (Pre-University and First Year T.D.C. classes might be closed simultaneously).
- (iii) Several representations from the members of the staff of the college had been received in the University for intervention and saving them from the resultant hardship.
- (iv) A communication had been sent to the President of the Turst drawing its attention to the aforesaid provision of the Statute and asking him to follow the above procedure, with a copy to the Director of Education requesting him to throw light in the matter, to which reply was awaited.

*Resolved that* the Director of Education, Rajasthan be requested to inform the University about the action taken at his end in this connection.

26. The Syndicate considered letters Nos. F. 9-3/68 (CD) Pt. III dated 31st March, 1971 and 22nd April, 1971 from the Secretary, University Grants Commission informing the University that the Commission had decided to provide assistance to Universities for construction of hostels for Post-graduate students outside the Fourth Plan allocation also; each proposal being decided on its merits; and that the assistance of the

Commission would be on the usual sharing basis viz., 50% for a men's hostel and 75% for a women's hostel.

*Resolved that* the University Grants Commission and the State Government be approached for providing a grant for the construction of a hostel for post-graduate men students.

27. With reference to recommendation No. 7(IV) dated the 23rd April, 1971 of the Academic Council regarding B.Sc. (Pass/Honours) B.Ed. course, the Registrar reported that the Principal, Regional College of Education, Ajmer has clarified, vide his letters Nos. F. 9-196/70/3764 dated 4th May, 1971 and F. 9-196/70/4083 dated 8th May, 1971 that a candidate for the B.Sc. (Pass) B.Ed. course would be required to offer 3 subjects, namely (i) Workshop in Teaching, (ii) Foundation and Problems of Education and (iii) one subject from Applied Science at the Fourth Year examination, whereas a candidate for the B.Sc. (Hons.) B.Ed. course would have to offer one Honours Subject from Basic Sciences in addition to the course prescribed for the B.Sc. (Pass) B.Ed. examination.

In view of the above the Syndicate considered the following amendments suggested by the Principal of the College to the Ordinances proposed by the Faculty of Science vide its Resolution No. 19 dated the 8th February 1971 for the B.Ed. (Pass/Honours) B.Ed. examinations :—

The proposed Ordinance Nos. 329-E-9 and 329-E-10 be re-written so as to read as under :

“O.329-E-9 :

In the fourth year, a candidate will be allowed to take Honours course provided he has passed the Third Year examination getting a minimum of 50% marks in the aggregate; otherwise he will be allowed to take the subjects for pass course only.

The candidate for the Fourth Year Examination shall be examined in the following subjects :

*A. Theory (Part-I)*

Common for Pass and Honours students.

- (a) Workshop in Teaching.
- (b) Foundations and Problems of Education.
- (c) Applied Sciences—

Any one of the following :

- ( i ) Agriculture appliances.
- ( ii ) Electronics.
- (iii) Production Processes.
- (iv) Ceramics.
- ( v ) Fruit and Seed Production and Fruit Preservation.
- (vi) Bee Keeping and Cattle Management.
- (vii) Milk Products and Milk Testing.

*For Honours students only—*

- (d) Honours subject—one of the following :

- ( i ) Mathematics.
- ( ii ) Chemistry.
- (iii) Physics.
- (iv) Botany.
- ( v ) Zoology.

*B. Practical—II.*

Common for Pass and Honours students—

- (a) Applied Science—as in theory at (c) above.

*For Honours students only—*

- (b) Honours subjects—One of the following :

- { i . } Chemistry.
- ( ii ) Physics.

(iii) Botany.

(iv) Zoology.

C—Internship in Teaching (Common for Pass and Honours students).

O.329E—10 :

In order to pass at the B.Sc. (Pass) B.Ed. Examination a candidate should obtain a minimum of 36% marks in each subject, in theory and practical separately as well as in internal assessment and external examination separately; and he should also obtain a minimum of 36% marks in Internship Teaching.

In order to qualify for the B.Sc. (Hons.) B.Ed. Degree a candidate should obtain—

- (a) the minimum pass marks in the subjects for pass Course,
- (b) a minimum of 36% marks in theory and practical separately as well as in internal assessment and external examination separately and 50% in the aggregate in the Honours subject, and
- (c) a minimum of 48% marks in the aggregate of all the four examinations to be worked out in the manner stated hereinafter in this Ordinance

A candidate who appears at the B.Sc. (Hons.) B.Ed. Examination and passes in all the subjects but obtains less than 50% marks in the Honours subject shall be awarded the B.Sc. (Pass) B.Ed. degree and placed in an appropriate division. Further, if a candidate for the B.Sc. (Hons.) B.Ed. Examination does not obtain at least 48 p.c. marks in the aggregate of all the four examinations to be worked out as indicated below, he will be awarded only a B.Sc.

(Pass) B.Ed. degree and placed in the Third Division even if he has obtained more than 50% marks in the Honours subjects.

Division will be awarded to successful candidates at the end of the Fourth Year Examination and the following aggregate of marks will be taken into consideration for the purpose :

20% of the aggregate in the First Year.

30% of the aggregate in the Second Year.

100% of the aggregate in the Third Year.

100% of the aggregate in the Fourth Year.

Separate division shall be awarded for Internship Teaching.

Successful candidates will be awarded divisions as under :—

*For B.Sc. (Hons.) B.Ed.*

First Division — 60% or more in the aggregate of Pass and Honours subjects.

Second Division — 48% or more but less than 60% in the aggregate of pass and Honours subjects.

*For B.Sc. (Pass) B.Ed.*

First Division — 60% or more in the aggregate.

Second Division — 48% or more but less than 60% in the aggregate.

Third Division — 36% or more but less than 48% in the aggregate.

A candidate who appears at the Fourth Year B.Sc. (Honours) B.Ed. Examination and passes in

all the subjects of the B.Sc. (Pass) B.Ed. Course but fails in the Honours subject will be declared to have passed the B.Sc.(Pass)B.Ed.Examination and his division will be worked out on the basis of the marks obtained by him in the subjects of the B.Sc. (Pass) B.Ed. Examination.

*Resolved that* the B.Sc. (Pass) B.Ed. and B.Sc. (Hons.) B.Ed. Courses as approved by the Academic Council together with the Ordinances & Regulations in that behalf and the amendments suggested above by the Principal, Regional College of Education, Ajmer be accepted.

28. The Syndicate considered a request of Dr.B.C. Lodha, University Lecturer in Botany as contained in his letter dated 12.4.71 duly recommended by the Head of the University Department of Botany for providing 100% financial assistance and, if that was not possible, 75% assistance towards his air fare for attending the Ist International Micological Congress, 1971 to be held in Exeter (England) from 7th to 16th Sept., 1971.

In this consideration it was reported to the Syndicate.that the 25% contribution towards the air fare by economy less would amount to Rs.1,600/-approximately as against a balance of Rs. 1,150/-only available in the relevant budget head of the University.

*Resolved that* 50% air fare by economy class out of the un-assigned grant of the U.G.C. for 1971-72 and 25% air fare by economy class out of the University funds. be sanctioned to Dr. Lodha for the purpose and the provision in the relevant Budget Head be raised in the Revised Estimates to make up the short-fall.

29. With reference to the Syndicate Resolution No. 7 dated the 16th May. 1970 and No. 11 dated the 28th September, 1970 regarding the starting of R.A.S. and I.A.S. training courses, the Registrar reported that :



- ( i ) The Department of Social Welfare made a proposal to the effect that the University might start an All India and State Services Pre Examination Training exclusively for the candidates belonging to Scheduled Castes and Scheduled Tribes in the State of Rajasthan, and offered to provide necessary grant for the purpose.
- ( ii ) The matter was discussed with the Director of the Department of Social Welfare and he was informed that the University had a scheme for starting such courses for all students, that in the opinion of the University segregation of students belonging to Scheduled Casts and Scheduled Tribes would not be in their interest and that the University could accept these students if the Department was willing to provide finances equal to the total fee chargeable from them.
- ( iii ) No reply had so far been received from the Department of Social Welfare despite a D.O. reminder to the Director.
- ( iv ) Dr. S.P. Verma who was requested to be the Hony. Director of the Programme expressed his inability to undertake this responsibility and suggested the name of Dr. C.P. Bhambhari for the same.
- ( v ) Dr. S.P. Varma also suggested that (a) the Syndicate might take a final decision whether the University would like to implement its own Scheme or drop the same and accept the Government Scheme and (b) if the University Scheme was to be implemented, the Syndicate might accept the entire scheme proposed by the Committee appointed to

consider this matter vide its report dated 11.3.70.

In this connection the Director of Education, Rajasthan informed the Syndicate in the meeting that the State Government had since decided to start R.A.S. and I.A.S. training courses for the candidates belonging to the Scheduled Castes/ Scheduled Tribes in the Officers' Training School.

*Resolved that* (i) the information given by the Director of Education be noted and (ii) consideration of the proposal regarding starting such courses in the University be *post-poned*.

30. The Registrar reported that :

- (i) The Management of the Bhanwarlal Dugar Ayurveda Vishvabharti, Sardarshahr vide its letter dated 26th March, 1971 informed the University that due to the financial stringencies and insufficient grant from the Government it was not possible for the Management to run the institution any longer and it was decided by the management to close down the institution w.e.f. July, 1971.
- (ii) The Board of Inspection at its meeting held on the 7th April, 1971 (vide its Res. No. 27) recommended that the Management be asked to take steps for closing the institution in accordance with the provisions of S.26 (8) (which required an advance notice of one year to the employees of the institution and to the University and closure in gradual stages), adding further that if the Management was able to fulfil the obligations towards the employees of the institution and also ensured that all the students of the institution were accommodated in the existing colleges, it could send a further request for consideration of the University.

- (iii) The above recommendation of the Board was approved by the Syndicate vide its Res. No. 33 dated 17.4.1971 and the Management was informed accordingly.

In this connection the Syndicate considered letter No. nil dated the 28th April, 1971 from the Vice-President, Gandhi Vidya Mandir, Sardarshahr informing the university that :—

- (1) As the institution was undergoing financial trouble for the past few years and it was only provisionally affiliated to the University, it did not think it proper to enter into any agreement of service with any of its employees.
- (2) The staff was employed in the institution as per Rules & Regulations of the Department of Ayurveda, Government of Rajasthan where the conditions were far easier than the present conditions of the University prior to the provisional affiliation.
- (3) However, out of humanitarian considerations three months' notice had been given to the permanent employees and one month' notice to the temporary employees for termination of their services.
- (4) The Students' Union of the college had addressed a letter to its Principal for issuing Transfer Certificates to the students, in reply to which the Principal had been instructed to issue T.C. as per rules.
- (5) The college would run as usual till the end of this session i.e. 30th June, 1971 by which time all the examinations of the session would be over.

- (6) In pursuance of the request from the Principal it had been accepted by the Executive Committee that looking to the teaching need and nearness of the examinations the summer vacation in the months of May and June be not given so that all work relating to teaching and examinations etc. may finish by due time.
- (7) In the conditions stated above the Management did not find any alternative except closing the institution w.e.f. July, 1971.

*Resolved that* in the circumstances explained by the Management, it be permitted to close down the college w.e.f. July, 1971 in relaxation of the provisions of S.26 (8) of the University Hand Book Pt. II.

30. With reference to the Syndicate Resolution No. 24 dated the 17th November, 1969 resolving that in view of the financial difficulties the Research Unit in parapsychology be wound up forthwith and necessary steps be taken in this direction the Registrar reported that :

- (1) The Unit was wound up on the 21st November, 1969 (afternoon).
- (2) Shri H. N. Banerjee claimed some material from the University saying that the same belonged to him. On the other hand, some material of the University appeared to be with him.
- (3) In order to find out as to what articles actually belonged to Shri Banerjee and to the University, it was necessary for some one to go through the lists of articles. It was therefore, suggested to Shri Banerjee that he might intimate the names of five senior persons from the University staff in whom he had full confidence.

The University would then choose one of them and request him to undertake the aforesaid responsibility.

- (4) Shri Banerjee replied that it was not clear to him as to why he should nominate any person from the University and that if there was any particular reason for bringing in a third person, the same be intimate to him.
- (5) There were 7 almirahas in the material of the unit which were locked and the keys of which were not available. Shri Banerjee was asked vide this office letter dated 28.7. 1970 to return the keys of these almirahs if they were with him.
- (6) No reply was received from Shri Banerjee and the material of the Unit continued to be in the charge of the Central Office. The library room and one other room formerly occupied by the unit in the Humanities Block were still locked and untouched. Other rooms occupied by the unit were vacated when the unit was wound up to make them available for use of other departments. The material lying in those rooms was shifted to the central office where it was stored in a room in the basement. The library of the unit contained books on Psychology and some other subjects as well.

*Resolved that* a legal notice be served upon Shri H. N. Banerjee in consultation with the University Legal Adviser.

31. The Syndicate considered the recommendation dated 10-5-1971 made by the Committee appointed by the Vice-Chancellor in connection with the compilation of the Joint Prospectus of the University Teaching Wing for the session 1971-72, to the effect that the Identity Card fee prescribed @ 25 paisa per student for the under-graduate classes be

raised to 50 paise so as to be in conformity with the rate prescribed for the post-graduate classes and also to meet the actual expenses incurred on the preparation of the Identity Cards.

*Resolved that* the aforesaid recommendation of the Committee be accepted.

*Section 'B'*

32. The following orders of the Vice-Chancellor were reported to the Syndicate.

“Orders entertaining as a special case the applications of the following colleges, received after the expiry of the due date, for fresh affiliation w. e. f. July, 1971 and appointing Inspection Committees in each case for making local enquiry and report.

S. No.	Name of the College	Standard/subject in which affiliation required
1.	S.B.D. Govt. College, Sardarshahr.	T.D.C (Science)
2.	M.S.J. College. Bharatpur.	M. Com. (All groups) LL.B.
3.	Govt. College, Ajmer.	M.A. Philosophy.
4.	Bangur College, Deedwana.	Addl. Optional subject Stenotyping for T.D.C. (Com.)
5.	S.D. Govt. College. Beawar.	LL.B. and M.Sc. (Chemistry)
6.	Smt. Gomti Devi Govt. Girls College, Alwar	T.D.C. (Arts)-Addl. Optional subject Home Science.

1	2
7. Govt. College, Dausa.	T.D.C. (Science) T.D.C. (Arts)-Addl. Optional subject Geography.
8. R. R. College, Alwar.	M.Sc. Physics.
9. S.R.S. Govt. College, Kaladera	T.D.C. (Arts)-Addl. Optional subject Geography.
10. J.D.B. Girls College, Kota.	T.D.C. (Arts)-Addl. Optional subject Home Science.
11. M.L.V. Govt. College. Bhilwara.	M.Sc. (Chemistry), LL.B., T.D.C. (Com.) Addl. Optional subject Steno-Typing.
12. Govt College, Sriganganagar.	M.A. (History)
13. Dungar College, Bikaner.	M.A. (Philosophy).
14. Govt. Colleg Rajgarh.	T.D.C. (Science).
15. Govt. Colleg Kota.	M.A. (History and Mathematics) Diploma in Labour Law and Personnel Management.
16. Govt Girls College, Bharatpur.	T.D.C. (Arts)
17. Govt. Girls College, Bhilwara.	T.D.C. (Arts)
18. Govt. College, Sawai Madhopur.	T.D.C. (Arts and Com.)
19. M.R. Engineering College, Jaipur.	M.E. (Met.) for regular students.

*Resolved that* the aforesaid orders of the Vice-Chancellor be confirmed.

( ACCOUNT AND FINANCE SECTION )

*Sectoin 'A'*

33. The Syndicate *approved* deletion of the words—'3-D classes IV Servants.....Rs. one per day' in the Schedule attached with 0.352 as the same cadre was covered under the heading '3-C' of the same shedule, there being no grade which was less than Rs 60/-

34. The Syndicate considered a request from the University employees residing in the 'C' Scheme area of Jaipur, forwarded by Shri D. C. Swami and Shri K. C. Bakiwala ( Members Syndicate ) suggesting names of Homeopathic Doctors for being enlisted as authorised Medical Attendants of the University.

*Resolved that* the names of the following Homeopathic Doctors be added to the list of the authorised Medical Attendants of the University :

1. Dr. Chandra Prakash,  
C-17, New Colony, Jaipur.
2. Dr. Keshav Gopal Rajvanshi.  
282, Hawa Mahal Bazar, Jaipur
3. Dr. R. P. Mathur,  
Haldion-ka-Rasta, Jaipur.
4. Dr. S. P. Kansal,  
Haldion-ka-Rasta, Jaipur.
5. Dr. A. K. Sharma,  
C/o. Sari Sri Ram Homeo, M. I. Road,  
Opposite G.P.O., Jaipur.
6. Dr. R. K. Ganguli,  
Sardar Patel Marg. Opposite Govt. Press  
Jaipur.



35. The Vice-Chancellor pleased before the Syndicate the following proposals which he had discussed with Mrs. G. J. Unnithan, Member-Executive Committee of Campus Nursery School run in the premises of the University Gandhi Bhawan :

- (1) The activities of the Nursery School will be synthesised with the activities of the Gandhi Bhawan, but it will be a self-sufficient unit to be managed by a general body consisting of all parents, the teachers of the school, interested parents of old pupils, Director of Gandhi Bhawan, the Vice-Chancellor's nominee, Presidents of the RUTA, class III and class IV employees and the students' Union. An executive Committee may be elected from among these members for the day-to-day management of the school.
- (2) Children from all social backgrounds shall be eligible for admission, but sons and daughters of employees of the University, affiliated colleges and institutions and members of various academic and other bodies of the University will be given first preference.
- (3) As in the past, fees shall be charged according to the income of the parents. For socially and economically handicapped children of University employees, concession/freeship/scholarship shall be given on the basis of need. Scholarships shall be given in the form of books, clothing and other reading material.
- (4) Admission will be given to children in the age-group 3-6 years. Two classes shall be run by the school. Five seats in each class

shall be reserved for the children of socially handicapped parents, who are employees of the University (Harijans, backward castes, tribes etc.).

- (5) The philosophy & teachings of Gandhiji will be highlighted regularly in class work and through involvement of the children in Gandhi Jayanti and other celebrations.
- (6) The school will require more space. It is proposed that an additional large room may be added to Gandhi Bhawan for this purpose. The school shall contribute Rs. 8,000/- towards the construction of this room. The University shall contribute a matching grant.
- (7) This room shall be built in such a manner that architecturally the beauty of Gandhi Bhawan will not be spoiled. The room shall be the property of the University and when not in use, can be requisitioned by the Director, Gandhi Bhawan for activities related to the Gandhi Bhawan. The Director will then be responsible for the properties of the school.

*Resolved that* (i) aforesaid proposal be approved, (ii) a grant of Rs. 4,000/- be sanctioned towards the construction of the proposed additional room for the school and (iii) an additional sum of Rs. 1,000/- be sanctioned for providing games fixtures and (iv) the University Medical Officer be asked to do the medical check up of the children twice a year and keep a record of the same.

A. B. : Dr. K. C. Khanna offered to donate a small aquarium to the Nursery School and the Vice-Chancellor assured him that he

would ask the University Department of Zoology to look after the same.

The meeting ended with a vote of thanks to the chair.

Sd/-

P. L. Bhatnagar

Vice-Chancellor

17.5.71

Sd/-

L. P. Vaish,

Registrar

# APPENDIX A

Ref :—*Reso. No. 18 of Syndicate meeting of 14th May, 1971.*

Roll No.----- University Enrolment No.-----

## Pharmacists Diploma

This is to certify that-----  
-----of Birla College of Science and Commerce,  
Pilani, passed the Bachelor of Pharmacy Examination, Part II,  
of the University held in-----19-----and  
has completed the requisite practical training, in consequence  
thereof he is awarded the Pharmacists Diploma of the Univer-  
sity, under the provisions of O.299.

Dated-----

*Vice-Chancellor*

## APPENDIX 'A'

Ref :—Res. No. 12 A. of Syndicate 14.5.71.

Minutes of the Selection Committee Meeting for the selection of Readers in Geology held on Wednesday the 17th March, 1971 at 10 A.M. in the Syndicate Hall of the University Central Office.

The following were present :—

- |   |                            |
|---|----------------------------|
| Dr. P.L. Bhatnagar,<br>Vice-Chancellor.   | Chairman.                  |
| 2. Dr. G. Narayanan, Jaipur.  | Member, Syndicate.         |
| 3. Dr. M.W. Chaudhary,<br>Prof. and Head of the<br>Dept. of Geology,<br>Univ. of Rajasthan,<br>Udaipur. | Head of the<br>Department. |
| 4. Dr. I.C. Pandey,<br>Prof. and Head of the<br>Deptt. of Geology,<br>Punjab University, Chandigarh     | } Experts.                 |
| 5. Dr. S.K. Agarwal,<br>Deptt. of Geology,<br>Banaras Hindu Univ.<br>Varanasi.                          |                            |

Note :—Dr. P.N. Mathur, Dean, Faculty of Science (Principal, Government College, Ajmer) could not attend the meeting.

Out of the 20 candidates called for interview, the following eleven appeared before the Selection Committee :—

1. Dr. Ashok Madho Patwardhan, Chandigarh.
2. Dr. Ashit Baran Roy, Udaipur.
3. Dr. Bhanwar Lal Sharma, Udaipur.
4. Shri G.V. Damle, Udaipur.
5. Dr. N.C. Ghose, Patna.
6. Shri Mathuresh Behari Mathur, Jaipur.
7. Shri Nemi Chand Jain, Jaipur.
8. Dr. R.S. Chaudhuri, Chandigarh.
9. Dr. Vishnu Dutta Choubey, Kurukshetra.
10. Dr. A.V. Ulabhaje, Varanasi.
11. Dr. S.C. Khosla.

The following are recommended for appointment in order of preference :—

1. Dr. Ashit Baran Roy—

M.Sc. 1961—I dn.

Ph.D. 1962

Papers published : 12.

Teaching Experience : 6 years.

2. Shri N.C. Jain—

M.Sc. 1953—II Dn.—First position in the University.

Teaching Experience :—

Post-graduate : 4 }  
Total 16 } years.

The Geological mapping done by him is a fine piece of field work. He has good all round knowledge and good exposition.

Sd/—G. Narayanan.

Sd/—P.L. Bhatnagar,

Sd/—S.K. Agarwal.

*Vice-Chancellor.*

Sd/—M.W. Chaudhari.

MINUTES OF THE MEETING OF THE SYNDICATE  
HELD ON THURSDAY, THE 17th JUNE, 1971 AT  
9.00 A. M. AT THE UNIVERSITY OFFICE,  
JAIPUR.

**Present**

Prof. A. B. Lal, Vice-Chancellor  
(*In the Chair*)

2. Dr. B. N. Consul
  3. Shri D. C. Swami
  4. Prof. G. C. Pande
  5. Prof. G. S. Sharma
  6. Shri K. C. Bakiwala
  7. Dr. K. C. Khanna
  8. Prof. K. L. Varma
  9. Principal M. L. Bhargava
  10. Dr. M. P. Mathur
  11. Principal P. N. Mathur
  12. Principal (Mrs.) Rama Kochar
  13. Principal S. C. Tela
- Shri L. P. Vaish, Offg. Registrar.

*N. B. :—*Dr. G. Narayanan and Principal M. L. Agrawal could not attend the meeting.

Before proceeding with the business on the agenda Prof. G. S. Sharma and Prof. G. C. Pande accorded a hearty welcome to the new Vice-Chancellor, Prof. A. B. Lal on their own behalf and on behalf of the Syndicate, adding that the University was fortunate in having a person of his eminence as its Vice-Chancellor and expressing their confidence in the future development of the University under his able and inspiring guidance. Other members of the Syndicate associated themselves with the sentiments expressed by them. The Vice

Chancellor, Prof. A. B. Lal expressed his gratitude to the members of the Syndicate for the warm welcome accorded to him and observed that (with the guidance and co-operation of the members of the Syndicate) the Rajasthan University which had already made a mark in the academic world and which had eminent academics in its faculty could expect to make further progress.

1. The minutes of the meeting of the Syndicate held on 14th May, 1971 were confirmed.

*(Establishment Section)*

*Section 'A'*

2. With reference to its Resolution No. 2 (ix) dated the 7th June, 1969 and Resolution No. 2 dated the 27th September, 1969, the Syndicate considered an application dated 17th April, 1971 from Sri A. K. Lahiry, University Lecturer in Geology for an extension of his leave by one year and five months w.e.f. 25th February, 1971 to 24th July, 1972 i.e. for the full tenure of his Scholarship.

*Resolved that* leave without pay for one year w.e.f. 25th February, 1971 to 24th February, 1972 be granted to Shri A.K. Lahiry in continuation of two years' study leave already granted.

3. *Resolved that* a Committee consisting of the following members be appointed to review and suggest necessary changes in the existing study leave rules as well as the various provisions for other kinds of leave admissible to teachers :

1. Prof. G. C. Pande (Convener)
2. Prof. G. S. Sharma
3. Dr. K. C. Khanna
4. Dr. M. P. Mathur.
5. Prof. K. L. Verma



4. *Resolved that* the following minimum qualifications be prescribed for the post of Technical Assistant in the Department of Zoology in the grade of Rs. 150-8-190-10-210-15-330:

Higher Secondary with Diploma(s) in Electrical Engineering and Electronics.

5. The Registrar reported receipt of letter No. 4688 G dated the 24th May, 1971 from Dr. M. L. Mishra, Director, Institute of Correspondence Studies, intimating that he had been appointed by the U. G. C. as an expert member on two special committees set up for introducing correspondence courses in the University of Bombay and Andhra University.

*Resolved that* the report be recorded.

6. The Registrar reported receipt of letter No. 4289 G dated the 1st April, 1971 from Dr. M. L. Mishra, Director, Institute of Correspondence Studies, regarding grant of the Vice-President's award to Shri Kastoormal Kumawat, L.D.C. of the Institute, for securing the highest marks at the All India Hindi Typing Competition organised by the All India Hindi Parishad and requesting recognition of the merit of Shri Kumawat in some way.

*Resolved that* (i) the report be recorded and (ii) the question of giving recognition to the merit of Shri Kumawat be looked into by the Vice-Chancellor.

7. With reference to its Resolution No. 35, dated the 1st February, 1971 allowing Dr. Om Prakash, Director, University School of Commerce, Jaipur to attend the XVIII International Meeting of the Institute of Management Sciences held in Washington and to visit certain Universities, the Syndicate *resolved that* Dr. Om Prakash be granted duty leave for the period from 16.3.1971 to 7.4.1971.

8. The Syndicate considered the request of Dr. V. M. Sinha, Lecturer in Public Administration, for the grant of 2

years leave without pay from the beginning of the next session to enable him to accept an offer in U.S.A.

*Resolved that* leave without pay for one year be granted to Dr. V. M. Sinha to take up the assignment, vide Rule No. 4 of the Rules for Deputation of University Teachers to take up an assignment outside University, and he be informed that he will be allowed to retain his lien on the post held by him in the University for a period of one year only, and the leave *will not be extended in any case.*

9. The Syndicate considered the request of Sri K. D. Trivedi, Lecturer in Public Administration, for the grant of study leave on full pay for 9 months and 19 days from 19th July, 1971 to 6th May, 1972 with permission to prefix and suffix the summer vacations of 1970-71 and 1971-72, so as to enable him to attend the Master of Public Administration course which is a Pre-Ph. D. programme in the Maxwell School of Citizenship and Public Affairs, Syracuse University.

*Resolved* that the request of Shri Trivedi be not acceded to.

10. The Syndicate considered the request of Shri A. K. Sharma, University Lecturer in Public Administration for the grant of study leave without pay for one year w.e.f. 1.9.1971 in order to avail of a British Council Scholarship for 1971-72.

In this connection the Syndicate noted that Shri R. K. Arora, University Lecturer in the same Department was already on study leave without pay upto 6th August, 1971.

*Resolved that* Shri A. K. Sharma be granted leave without pay for one year (vide Rule No. 11 of the Study Leave Rules), provided that Shri Arora resumed duty in this University on the expiry of the period of his Study Leave without pay.

11. The Syndicate considered the request of Dr. Kuldeep Mathur, formerly University Lecturer in Public Administra-

tion, for waiving the payment of a sum of Rs. 2,881.94 on account of (i) three months salary including allowances (Rs. 1,800/-) required to be deposited in default of the fulfilment of the conditions of the bond executed by him before proceeding on leave in July, 1966 and (ii) a sum of Rs. 1,081.96 as salary and allowances for the period from 4-9-1970 to 28-10-70 which falls short of 3 months' notice.

*Resolved that* an amount equivalent to one month's salary and allowance only be recovered from him, as a special case, provided that this concession shall not form a precedent.

*Resolved further that* it be notified for the information of all University teachers that no relaxation will be made in future in the conditions of the bond and the period of notice as required under the rules.

12. The Syndicate considered the request of Shri C.D. Sharma, University Lecturer in Library Science, for the grant of 10 months leave from 15.7.71 to 15.5.72 with permission to suffix the summer vacation of 1971-72 (8 months leave on half pay which is at his credit and the remaining period as leave without pay) so as to enable him to accept an offer of a Senior Lecturership at the East African School of Librarianship, Makerere University.

*Resolved that* Shri C.D. Sharma be granted leave without pay for a period of one year from 15.7.71 to 14.7.72 under rule No. 4 of the Rules for Deputation of Teachers to take up an assignment outside University, and he be informed that he will be allowed to retain his lien on the post held by him in the University for a period of one year only and the leave will not be extended in any case.

13. With reference to its resolution No. 21 dated the 14th August, 1970 granting leave on half pay to Mrs. S. M. Sohla, University Lecturer in Library Science, upto 6th May, 1971 with permission to suffix the summer vacation, the Syndicate considered a request from Mrs. Sohla for grant of leave

without pay from 7th July, 1971 to April 30, 1972, so as to enable her to prosecute higher studies in Library Science at the Kent State University, Ohio.

*Resolved that* the request of Mrs. Sohla be not acceded to and she be informed that unless she decides to tender her resignation from University service in terms of Ordinance 380 of the University Hand Book Part II, she would report herself for duty in the University on 19th July, 1971 positively.

14.      The Registrar reported receipt of letter No. F. 2.40/70 (H.I.) dated 23.5.1971 from the Secretary, U.G.C., addressed to the Secretary to the Government of Pondichery, Department of Health Education & Welfare. (copy endorsed to this office). regarding the nomination by the U. G. C. of Prof. A. B. Lal, Vice-Chancellor and member of the U. G. C., to represent the Commission on the Committee of experts proposed to be appointed by the Pondichery Administration to examine the possibility of starting an Advanced Centre of French at Pondichery.

*Resolved that* the report be recorded.

15.      With reference to its Res. No. 12 dated 10.3.1971 postponing consideration of the recommendations of the Committee appointed (vide its Resolution No. 9 dated 27.9.1969) for recommending the number of Directors of Physical Education required for the various teaching units of the University after taking into consideration (i) the average number of players participating in the games and sports per day during the last three years and (ii) the norms fixed by the University Grants Commission, the Syndicate considered the recommendations made by this Committee at its meeting held on the 25th November, 1970.

*Resolved that* the report of the aforesaid Committee be referred to the Finance Committee to examine the issue in all its aspects, including (a) the existing number of Directors/Asstt. Directors of Physical Education in the University, and

(b) the question of upgrading the posts of Asstt. Directors to those of Directors.

*Resolved further* that meanwhile a reference be made to the U. G. C. for laying down norms for determining the number of posts of Directors/Instructors of Physical Education in the Universities. and also examining the possibility of giving financial assistance to the Universities for maintaining these posts.

16. The Registrar reported (i) that Shri J. C. Saxena, Assistant Registrar, University Studies in Science would attain the age of superannuation, viz. 60 years, on 17.2.1972, and (ii) that a letter dated 15th March, 1972 has been received from the Dean, University Studies in Science, in connection with the question of granting extension in service to Sri Saxena, under Ordinance 376 F of the University Hand Book Part II.

*Resolved* that the recommendations of the Registrar be also obtained and placed before the Syndicate.

17. With reference to Syndicate Resolution No. 9 dated the 17th April, 1971 appointing Dr. Raj Krishna, Professor & Head of the University Department of Economics, as a member to serve on the Sub-Committee appointed for examining the question of implementation of a Running Grade for University teachers, the Registrar reported that Dr. Raj Krishna had intimated (vide his letter No. DE/C-1/71/340 dated the 13th April, 1971) that he should not be included in the above noted sub-committee to serve as a member until the principle of a single grade has been accepted.

*Resolved that* the letter be recorded.

18. The Syndicate considered the request of Dr. V P. Dixit, University Lecturer in Zoology, for the grant of study leave on half pay for 8 months and 6 days with effect from 1st September, 1971 to 6th May, 1972, with permission to suffix the summer vacation of 1971-72, so as to enable him to

avail of a nine-months bursary awarded to him by the Finnish Government as a post-doctoral Fellowship for higher studies in Zoology at the University of Turku, Finland.

*Resolved that* Dr. V. P. Dixit be granted study leave on half pay for 8 months and 6 days w. e. f. 1st September, 1971 to 6th May, 1972, suffixing the summer vacation of 1971-72.

19. *Resolved that* the following minimum qualifications be prescribed for the post of Homoeopath in the scale of Rs. 275-20-375-25-650 for the University Homoeo Clinic provided under New Items of the budget for the year 1971-72 :

(i) Graduate with Diploma/Degree in Homoeopathy granted by a University, Medical Corporation, examining body or other Institution in or outside India.

(ii) Ten years experience of regular practice of the Homoeopathic system of medicine.

20. The Syndicate considered letter No. Estt./T/L/5 dated the 1st June, 1971 from Prof. Daya Krishna, Head of the Department of Philosophy, requesting the grant of one year's leave from July, 1971 with a possible extension till the end of August, 1972, with permission to avail of the summer vacations of both the sessions 1970-71 and 1971-72, so as to enable him :-

(i) to accept an Open Grant Fellowship of the East West Centre, Honolulu, Hawaii, from July, 1971 to December, 1971;

(ii) to accept an invitation for a Visiting Professorship at Carleton College, Northfield, Minnesota from Jan. 1972 to March 1972; and

(iii) to accept a Research Fellowship either at the Centre of Advanced Study in the Behavioural Sciences at Stanford, California or a Unesco Fellowship for the

period from April, 1972 till the end of August, 1972.

*Resolved that* Prof. Daya Krishna be granted leave without pay w. e. f. 19th July, 1971 to 18th July, 1972 under Rules 4(a) of the Rules for Deputation of University Teachers to accept assignment outside the University with permission to avail of the residue of the summer vacation for the session 1970-71.

21. With reference to its Res. No.8 dated the 14th may, 1971, rejecting the request of Dr. M. C. Vaish, University Lecturer in Economics for the grant of 2 years leave without pay from 1st July, 1971 to 30th June, 1973, so as to enable him to accept the offer of an assignment to teach Economics in the Department of Economics at the University of Liberia, Monrovia, Liberia, (West Africa), the Syndicate reconsidered the request of Dr. Vaish for the grant of 2 year's leave without pay from 1.7.1971 to 30.6.1973 for the above purpose.

*Resolved that* Dr. M. C. Vaish be granted leave without pay for one year w. e. f. 1.7.1971 to 30.6.1972 under Rule 4 of the Rules for Deputation of University Teachers to take up an assignment outside the University, and he be allowed to retain his lien on the post held by him in the University for a period of one year and *no further extension of leave without pay be granted to him.*

22. The Syndicate considered the request of Shri N. K. Singhi, University Lecturer in Sociology, for the grant of study leave on full pay w.e. f. 22.7.1971 for one academic session, to enable him to avail of a scholarship to pursue a Course of Advanced Study in an American University for the session 1971-72

*Resolved that* Sri N.K. Singhi be granted study leave on half pay for one year for the session 1971-72.

23. With reference to Syndicate Resolution No. 14 dated the 16th May, 1970, read with Resolution No. 23 (ii) dated 4.7.1970 under which Dr. Yogendra Singh, Reader in the Department of Sociology, was granted one year's leave without pay w. e. f. the 11th June, 1970, to enable him to join the University of Jodhpur, as Professor of Sociology the registrar reported receipt of a letter dated the 1st May, 1971 from Dr. Yogendra Singh stating that (a) while serving as Professor of Sociology at Jodhpur University, he received an offer from Jawahar Lal Nehru University, (b) he had accepted the offer and joined the Jawaharlal Nehru University on April 6, 1971, and (c) that since his leave without pay from the Rajasthan University expired on June 11, 1971, he may be granted leave facility for another one year.

*Resolved that* (i) the request of Dr. Yogendra Singh for extension of leave be not acceded to; (ii) his lien on the post of Reader in the University Department of Sociology be deemed to have terminated w.e.f. 6th April 1971, when he joined the Jawaharlal Nehru University without permission from this University, and (iii) he be required to pay to the University an amount equivalent to his pay and allowances for one month and twenty one days.

24. The Syndicate considered the application of Dr.D.C. Agrawal, University Lecturer in English, recommended by the Head of the Department of English and the Dean, University Studies in Science, for permission to attend a nine-month Diploma Course in the teaching of English at the Central Institute of English, Hyderabad, for the period from 1.7.1971 to 31.3.1972.

*Resolved that* special leave on full pay w.e.f. 1.7.1971 to 31.3.1972 be granted to Dr. Agrawal so as to enable him to join the training course in English at the aforesaid Institute.

25. With reference to its Resolution No. 24 dated 14.8.1970 read with Resolution No. 10(i) dated 14.12.1970 under



which Dr. A. Ramesh Rao, University Lecturer in Zoology was sanctioned (i) leave on half pay from 19.10.1970 to 22.1.1971 and (ii) leave without pay from 23.1.1971 to 18.10.1971, so as to enable him to avail of a post-doctoral Fellowship of the National Institute of Health U.S.A., the Syndicate considered a request from Dr. A. Ramesha Rao for extension of leave without pay for one year from 19.10.1971 to 18.10.1972 so as to enable him to—

- ( i ) complete the research programme undertaken by him,
- (ii ) participate in scientific conferences,
- (iii) attend short training courses concerning radiation and cancer Biology, and
- (iv) visit some important universities in U.S.A.

*Resolved that* leave without pay already granted to Dr. A. Ramesha Rao be extended for one year w.e.f. 19.10.1971 to 18.10.1972 and he be informed that *no further extension will be granted to him.*

26. The Syndicate considered the request of Mrs. F. E. Krishna, University Lecturer in English, for the grant of study leave for one year w.e.f. 17.7.1971, with permission to avail of the summer vacation of 1971 so as to enable her to complete her remaining research work at the Universities of Hawaii and Minnesota.

*Resolved that* study leave on full pay be sanctioned to Mrs. F.E. Krishna w.e.f. 17.7.1971 to 16.7.1972.

27. With reference to the New Items of Expenditure for the year 1971-72 whereunder a provision has been made for having University Studies in Commerce (on the analogy of University Studies in Arts/Science) and providing a Dean and Assistant Dean for the University Studies in Commerce, the Vice-Chancellor apprised the Syndicate that Prof. Om Prakash had requested for the post of an Associate Dean in the proposed University Studies in Commerce.

*Resolved that* the consideration of the aforesaid request be deferred.

28. The Registrar reported receipt of a letter dated 28th May, 1971, from Dr. S. N. Sen, Vice-Chancellor, University of Calcutta, forwarding thereunder a list of University teachers from the Universities of Bangla Desh, who had temporarily come over to India and requesting that the University might consider providing some of them with suitable jobs for a temporary period of about six months.

*Resolved that* the Vice-Chancellor be authorised to explore the possibility of providing suitable jobs to some of the teachers of the Bangla Desh in consultation with the Deans/Directors/Heads of the Department concerned as per request of Dr. S.N. Sen, Vice-Chancellor, University of Calcutta.

#### *Section 'B'*

29. The following orders of the Vice-Chancellor were reported to the Syndicate :—

( i ) Orders dated 17th May, 1971 granting extension of the appointments of the following as Dy. Director and Asstt. Director of Maharani's College for the session 1971-72 on the existing terms and conditions as recommended by the Director, Maharani's College :—

(A) Dr. (Miss) K. Zutshi, Reader in Chemistry as Dy. Director.

(B) Dr. (Mrs.) S. Handa, Lecturer in Mathematics as Asstt. Director.

(ii) Orders dated 29th May 1971 (a) appointing Dr. R.C. Mehrotra, Prof. & Head of the Department of Chemistry as Dean, University Studies in Science for a period of three years w e.f. 23rd July, 1971 on the usual terms and conditions vice Dr. G. C. Patni

whose term as Dean, University Studies in Science expires on 22nd July, 1971.

(b) granting an extension in the term of appointment of Dr. M.G. Bhatwadekar, Reader in Physics, as Associate Dean, University Studies in Science for a further period of one year w. e. f. 1.7.1971 to 30.6. 1972 on the existing terms and conditions in the interest of continuity.

(c) granting an extension in the term of appointment of Miss K.V. Shah, Asstt. Director, Physical Education, as Warden, Annie Besant Hostel upto the end of the session 1971-72 on the same terms and conditions.

(iii) Orders dated 1st June, appointing Dr. C.P. Bhambhari, Reader in Political Science, as Chief Rector with immediate effect vice Dr. J. N. Gaur, whose resignation has been accepted.

(iv) Orders dated the 1st June, 1971 sanctioning house rent allowance to Shri Chandan Singh, Litt. Peon University Department of Zoology, Udaipur as a special case with retrospective effect viz. from 8.2. 1971 in relaxation of rule No. 6 (iii) of the Rajasthan University House Rent Rules, 1970 in view of the fact that he was transferred to Geology Department, Udaipur in the month of February, 1971 from the office of the Dean, University Studies in Science, Maharaja's College Campus, and he did not know that he will have to submit the rent deed again for the grant of house rent allowance to him & further the rent deed could not be available to him, and thus he could not submit the rent deed in time.

*Resolved that the aforesaid orders of the Vice-Chancellor be confirmed.*

#### ACCOUNTS AND FINANCE SECTION

30. The Syndicate considered the request of Dr. B. C. Lodha, University Lecturer in Botany, to the effect that his

medical claim amounting to Rs.507.80, in respect of treatment received by his wife at Brethern Mission Hospital, Dahanu Road (Thana District) Bombay during 1969-70 be allowed to be paid in relaxation of Rule 4(d) of Rules, 1962.

*Resolved that the claim be first referred to Dr. B. N. Consul, Member Syndicate Principal, Medical College, Jaipur for advice.*

31.      With reference to its Res. No. 4 dated 29.4.1970, fixing a ceiling on the number of calls above the limit of admissible free calls permitted by the Post and Telegraph authorities, the Syndicate considered a request from Mrs. C. K. Dandiya, Director-Incharge, University Department of Adult Education (Extension Wing), to the effect that the amount payable by a University employee on account of telephone calls in terms of the Syndicate Resolution referred to above be calculated on an annual basis, as against quarterly, as was being done at present on the basis of quarterly bills received from the P & T Department.

*Resolved that the Status quo be maintained.*

32.      The Syndicate considered the request of Dr. Krishna C. Joshi, Professor in the Department of Chemistry, to the effect that his medical claim amounting to Rs. 491.12 in respect of the treatment received by his wife at Sir Sunderlal Hospital, Banaras Hindu University, during the period 1970-71 be allowed to be paid in terms of Rule 9 of the Medical Aid Rules, 1970.

*Resolved that the claim be first referred to Dr. B. N. Consul, Member Syndicate and Principal, S. M. S. Medical College, Jaipur, for advice.*

33.      With reference to its Res. No.20 dated 20th September, 1970 according to which Cheques below the amount of Rs. 2,500.00 are signed by the Dy. Registrar (Accounts & Finance) and cheques for amounts above Rs.2,500.00 are required to be counter signed by the Registrar, the Syndicate clarified that the above arrangement is without prejudice to the autho-

city resting with the Registrar to sign cheques of any denomination.

( EXAMINATION & SECRECY SECTION )

*Section A*

34. *Resolved that* as unanimously recommended by the referees concerned, the degree of Ph. D. of the University be conferred upon the following candidates on the subjects noted against each :—

S.No.	Name	Subject
1.	Shri Kamta Prasad	'Morphological and Histochemical Studies in the family crucifere.'
2.	Shri Q. S. Kapoor	"L-X-Ray Emmission Spectra-of some heavy elements."
3.	Shri R.S.D. Mittal	"Non - benezenoid — Aromatic Compounds."
4.	Shri K. S. Rajora	"War and Diplomacy in Rajasthan (1707-1818)."

35. *The Syndicate approved* the following dates for the commencement of the various University examinations to be held in 1972 :

S.No.	Name of Examination	Date of Commencement of the Examination
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1. M.A., MSc., M.Com., Second & Final Year T.D.C.Examins-

tions (Arts/Science and Commerce) B.Sc. (Ag.) Part II and III, B. A. and B. Sc. Honours Thursday, March 30, Part I and II and B. Com. 1972 Honours.

2. I Year T.D.C. (Science) Thursda, March 30, 1972.
3. I Year T.D.C. (Arts & Commerce) Pre-University (Arts, Science and Commerce), Pre-Professional (Ag.), B. Sc. (Ag.) Part I Diploma Course in Adult Education, Diploma in Cost and Works Accountancy Monday, (Part I, II & III), M. B. A., April 10, 1972. B.Lib.Science, Diploma in Banking & Finance.
4. LL. B., LL. M. and Diploma Examinations in the Faculty of Law, M.Ed. and B.Ed. including the examinations of Regional College of Education, Ajmer. Monday. April 24, 1972.

Note : The dates for the commencement of examinations in the Faculties of Medicine, Ayurveda, Engineering, and Sanskrit will be fixed in consultation with the Dean of the Faculties concerned.

36. With reference to the observation made by the Academic Council to the effect that the system of moderation of question papers may be accepted in principle for both undergraduate and post-graduate examinations (as contained in Res. No. 28 para 10 of the minutes of the Council dated 13th/

15th February, 1971 and referring the observation to the Faculties of Arts, Science, Commerce & Law, the Syndicate *resolved* that the matter be also referred to the Finance Committee as the proposal involves financial implications.

### *Section 'B'*

37. With reference to the recommendation of the Academic Council, approved by the Syndicate, to the effect that w.e.f. Pre-University (Sc.) Examination of 1972, candidates appearing at the Pre-University (Sc.) Examination and offering Biology as an optional subject be required to obtain, for a pass, 33% marks in Theory as a whole and not separately in each section, the Registrar reported that on the recommendation of the Dean, Faculty of Science, the Vice-Chancellor passed orders implementing the aforesaid decision with effect from the Pre-University (Sc.) Examination of 1971.

*Resolved that the* aforesaid order of the Vice-Chancellor be confirmed.

## ACADEMIC SECTION

### *Section 'A'*

38. With reference to its Resolution No. 20 (VI) dated the 14th May, 1971 the Syndicate reconsidered recommendation No. 24 dated the 23rd April, 1971, of the Academic Council to the effect that the condition of obtaining a minimum percentage of marks at the qualifying examination for the purpose of admission to the M.A., M.Sc., and M.Com. courses as laid down in Ordinances Nos., 211, 234 and 248 of the University Hand Book Pt. II be relaxed for admission to be made to the Previous class of the M.A./M.Sc./M.Com. in the affiliated colleges in the session 1971-72.

*Resolved that* the operation of the part of Ordinances 211, 234 & 248 relating to a minimum percentage of marks at the qualifying examination for the propose of admission to the Previous class of M.A., M.Sc. and M.Com. courses be *suspended* for the session 1971-72.

Arising out of the above, the Syndicate *fur ther resolved that :*

- (I) For the candidates who pass the M.A. (Previous) Examination, 1971 in the subject of Economics and Political Science as regular student of the 'University Evening College for Postgraduate Instruction' (started last year), M.A. (Final) classes in the evening be arranged.
- (II) For the candidates who pass the B.A./B.Sc./B.Com. examination of the University in the year 1971 from Jaipur as their Centre for the Main Examination and who cannot be accommodated in the day classes and also do not come under any category of candidates permitted by the University to take examinations, privately, Evening classes (upto one Section each) in the subjects of Economics and Political Science be arranged if necessary as last year, provided that the number of such students is not less than 30 in each subject.

39. With reference to the Syndicate Resolution No. 36(iii) dated the 1st February, 1971, read with Res. No. 23 dated 7.4.1971 of the Board of Inspection duly approved by the Syndicate (vide its Res. No. 23 dated 17.4.1971), the Registrar reported that letters had accordingly been addressed to the Management of the Lal Bhadur Shastri Evening College, Jaipur, to shift the classes from the Rajasthan College building, but the same had not been done so far and consequently orders for extending the provisional affiliation of the college w.e.f. July, 1971 had not been passed.

In this connection the Syndicate considered a letter dated the 9th June, 1971 from the Chairman, Governing Body of the College, stating that (i) inspite of his best efforts he had not yet been able to find alternative accommodation for the Lal Bhadur Shastri Evening College, and (ii) he had been trying to construct and complete the new building for the college in some months, and is, therefore, requesting the



University to (a) permit the college to run in the Rajasthan College building for the session 1971-72 and (b) extend the provisional affiliation for the T.D.C. (Arts) classes w.e.f. July, 1971.

*Resolved that* (i) the Chairman, Governing Body of the College be informed that the shifting of the three-year degree classes from Rajasthan College campus should start right during the academic session 1971-72 as and when the rooms in the new building of the college are ready and the use of the Rajasthan College building shall not be permitted to the college *in any case beyond the session 1971-72* and (ii) the provisional affiliation of the college for T.D.C. (Arts) classes be extended by one year w.e.f. July, 1971.

40. The Syndicate considered the question of attendance at lectures, tutorials and practicals for regular students being made optional.

*Resolved that* the matter be referred to the Academic Council for consideration.

41. The Syndicate considered reviewing the rules laid down by it in respect of the maximum fees permitted to be charged from students by the non-Government colleges affiliated to the University in the Faculty of Education.

*Resolved that* since the existing rules already allow these college to charge fees 50% above the normal fees prevalent in the Government colleges of corresponding standard, no further increase in fees be permitted.

*Resolved further* that the State Government be requested to give suitable grant-in-aid to the non-Government colleges of education so as to enable them to run on a sound footing.

42. With reference to the Syndicate Resolution No. 24 dated the 14th May, 1971 regarding the continuance or otherwise of the S.S.G. Pareek Teachers' Training College, Jaipur,

beyond the B.Ed. Examination of 1971, it was reported to the Syndicate that (i) after going through the comments of the Administrator of the college on the inspection report as contained in his letter No. 1865-B.Ed. dated the 17th May, 1971, the Vice-Chancellor invited the Administrator for discussing the whole matter and (ii) the Administrator met the Vice-Chancellor on the 28th May, 1971, explained the position personally and gave a solemn assurance that all the deficiencies would be made good before the college re-opens for the session 1971-72 and that he would send the complete compliance report by 15th July, 1971 at the latest.

In this connection the Syndicate considered letter No. 1867 B.Ed. dated the 31st May, 1971 from the Administrator of the college containing his written undertaking and requesting that provisional affiliation of the college be extended for one year more w.e.f. July, 1971.

*Resolved that* the Vice-Chancellor be authorised to take a final decision in the matter after making a local enquiry through an Inspection Committee to be appointed by him for the purpose.

43. With reference to its Resolution No. 22 dated the 14th May, 1971 the Syndicate considered the following recommendation (No. 8) made by the Staff Welfare Committee at its meeting held on the 19th March, 1971 :

“सिंडीकेट से संतुति की जावे कि भविष्य में विश्वविद्यालय की सेवा में नियुक्त किये जाने वाले कर्मचारियों के लिए जीवन बीमा कराना अनिवार्य किये जाने के प्रश्न पर विचार करें। समिति की राय में यह अति आवश्यक है।”

*Resolved that* it be at the option of the University employees to get their lives insured and to apply to the University for deduction of premium at source.

44. With reference to Rule No. 3 of the Endowment Fund Rules which requires that in the case of non-Government

affiliated college at least 10% of the total endowment fund should be invested in deposits in scheduled Banks and Government Securities in the joint account of the Registrar of the University and the management with the condition that on withdrawal could be made without the endorsement of the Registrar, the Syndicate considered letter No. ASSJ, 3 dated the 14th April, 1971 from the General Secretary, Shri Agarwal Shiksha Samiti (which manages the Agarwal College, Jaipur) requesting the University to exempt Agrawal College, Jaipur from making cash deposits towards Endowment Fund in the Joint account of the Registrar of the University and the Management.

*Resolved that* the aforesaid request of the General Secretary, Shri Agrawal Shiksha Samiti be not acceded to and he be asked to send a compliance report to the University in accordance with the existing Endowment Fund Rules.

45. The Syndicate considered a request made by the Management of S. S. Jain Subodh College, Jaipur, duly recommended by the Director of Education, Rajasthan, for exempting Shri N. M. Golechha (M.Sc. I class-1961 with experience of teaching degree classes for 9 years), Offg. Principal of the college, from the minimum qualifications laid down by the University for the Principal of a degree College, on the ground that he is painstaking, efficient and sincere in the discharge of his duties and tackle the students intelligently.

In this connection the Syndicate noted that the only deficiency in Shri Golechha's case was that his teaching experience fell short of that required by 3 years, as according to O-65 of the Univ. Hand Book Part II the minimum qualifications for the post of Principal of a Degree College are II class Master's Degree with 12 years experience of teaching degree and/or post-graduate classes.

*Resolved that* Shri N. M. Golechha be exempted from the minimum qualifications laid down by the University for the post of Principal of a Degree College.

46 The Syndicate considered an application of Shri Nand Kumar Shastri (M.A. II division-Hindi and Sanskrit; Vidya Vachaspati from Sanskrit Pracharak Mandal (not recognised by the University) with 6 years' experience of teaching Shastri classes and 4 years of degree classes in the Faculty of Arts), Principal, Rishikul Brahmacharya Asharma Sanskrit College, Lachmangarh recommended by the Management Committee and forwarded by the Director of Sanskrit Education, Rajasthan (vide his letter No. 7349 dated 18th March, 1971 read with his further letter No. 14125 dated 28th May, 1971) requesting for exemption from minimum qualifications laid down by the University for Principals of Post-graduate (Acharya standard) colleges in the Faculty of Sanskrit Studies, and further adding that in case the University was not willing to give him permanent exemption, he be allowed at least a period of three years to acquire the minimum qualifications.

In this connection the Syndicate noted that (i) the deficiencies in Shri Shastri's case are that he does not possess a I or II class Acharya Degree and as against the requisite teaching experience of 10 years Shastri classes, he possesses only 6 years experience of those classes and (ii) the Dean, Faculty of Sanskrit Studies has also recommended favourable consideration of the case.

*Resolved that temporary exemption from the minimum qualifications be granted to Shri Nand Kumar Shastri for a period of three years only during which he be asked to acquire the Acharya Degree at least in the II Division from a University/Institution recognised by the University for the purpose.*

47. The Syndicate considered the following proposals of Dr. R.G. Sarien, University Professor of Business Administration, referred to it vide Academic Council Res. No. 23 dated 23rd April, 1971 :

- ( i ) Resolved that whenever a post in the senior scale falls vacant in a teaching department the senior most persons in the immediately lower grade be asked to officiate for it and given an allowance of 20% of the minimum salary in the Higher grade for this purpose. Resolved further this should be applicable to all those who are officiating in various capacities on the day of acceptance of this resolution and be applicable with retrospective effect from the dates on which individuals were made to officiate.
- ( ii ) Resolved that employees of the University should not be asked to pay the fee of Rs. 4/- and made to apply on the prescribed forms, for various senior posts in the teaching wing. Further, all those who wish to be considered for a senior post should automatically be considered for the same on the basis of bio-data which they may be required to submit along with their request for the purpose.

Resolved that the aforesaid proposals be not accepted.

48. With reference to its Resolution No. 30 dated 14-5-1971 permitting the Management of the Ayurveda Vishwabharti, Sardarshar, to close down the college w. e. f. July, 1971 in relaxation of the provisions of S. 26 (8) of the University Hand Book Pt. II, the Syndicate considered (i) representations dated 20th May, 29th May and 31st May, 1971 from the member of the Staff of the college requesting that the Management be asked to run the college for at least one year more and give them one years' notice as provided for in S. 26 (8) of the Univ. Hand Book Pt. II and (ii) a representation dated 25th May, 1971 from the students of the College requesting the University to re-consider its decision and ask the Management to run the college till the last bath

clears out & (iii) a further representation dated the 2nd June, 1971 from the General Secretary of the College Students Union requesting that the Management be asked to run the college at least upto December, 1971 so that the students of the First and the Third Ayurvedacharya classes could complete their study and take their examination in December, 1971 and also the remanded students of the II Ayurvedacharya could take their supplementry examination.

In this connection the Registrar reported that under directions of the Vice-Chancellor a letter has been sent to the Vice-President Gandhi Vidya Mandir, Sardarshahr (the management of the college on 2nd June 1971, requesting him to review the matter and examine the possibility of the continuance of the institution for some months more so that December, 1971 examination might not be disturbed, to which no reply has been received so far.

*Resolved that* the Management of the Ayurveda Vishwabharti, Sardarshahr be requested to accommodate the wishes of the students as far as possible and help them as best they can.

49. With reference to the Syndicate Resolution No. 7 dated the 16th May, 1970 read with its Resolutions Nos. 11 dated 28-9-1970 and 29 dated 14-5-1971 regarding the starting of R.A.S. and I.A.S. training courses, the Registrar reported that :

(1) The Department of Social Welfare made a proposal to the effect that the University might start an All India and state Services Pre-Examination Training centre exclusively for candidates belonging to Scheduled castes and Scheduled Trsbes in the State of Rajasthan, and offered to provide necessary grants for the purpose.

(2) The matter was discussed with the Director of the Department of Social Welfare and he was

informed that the University had a scheme for starting such courses for all students, that in the opinion of the University segregation of students belonging to scheduled castes and scheduled tribes would not be in their interest and that the University could accept these students if the Department was willing to provide finances equal to the total fee chargeable from them

- (3) No reply was received from the Department of Social Welfare despite a D.O. reminder to the Director. However, the Director of Education, Rajasthan informed the Syndicate at its last meeting that the State Government had since decided to start R.A.S. and I.A.S. training courses for candidates belonging to the Scheduled castes scheduled tribes in the Officers' Training school, Jaipur.
- (4) Dr. S.P. Verma who was requested to be the Hony. Director of the Programme expressed his inability to undertake this responsibility and suggested the name of Dr. C.P. Bhamphri for the same.
- (5) Dr. S. P. Verma also suggested that (a) the Syndicate might take a final decision whether the University would like to implement its own scheme or drop the same and accept the Government scheme and (b) if the University scheme was to be implemented, the Syndicate might accept the entire scheme proposed by the Committee appointed to consider this matter (vide its report dated 11.3.1970).

In this connection Syndicate considered the question of starting R.A.S. and I.A.S. Training courses in the University. together with the aforesaid suggestions of Prof. S. P. Verma.

*Resolved that consideration of the aforesaid matter be deferred.*

50. The Syndicate considered D. O. letter No. F. 3 (27)/Edu. 3/71 dated the 22nd May, 1971, from Shri J. S. Mehta, Education Commissioner, Government of Rajasthan, Jaipur, suggesting that instead of individual college holding separate First Degree Convocations, Zonal Convocation might be arranged and the colleges be grouped into zones on the basis of their propinquity in location and the number of recipients of degrees.

In this connection the Registrar reported that on the recommendation of the Syndicate, the Senate at its meeting held on the 27th March, 1971 approved amendment to Notes No. (1) to S. 97 (b) of the Univ. Hand Book Pt. II (duly assented to by the Chancellor) so that the amended Note now reads as follows :

“Two or more colleges situated at the same or a neighbouring place may hold a joint First Degree Convocation under intimation to the University”.

*Resolved that* the Educational Commissioner be informed that in terms of the amended note to S. 97 (b) it was now open to the colleges to organise joint First Degree Convocation on their own initiation.

51. With reference to Syndicate Resolution No. 18 dated the 1st Feb., 1971, deciding, *inter alia*, that (i) the two Tabulators viz., Shri A.N. Saxena, Lecturer, Seth Moti Lal College, Jhunjhunu and Shri K.K. Pathak, Lecturer, S. S. G. Pnreek College, Jaipur who had been found guilty of tampering with the Tabulation Registrar with a view to inflating the marks of certain roll numbers, be debarred for ever from remunerative work (including tabulation work/connected with the examination of the University and (ii) the Governing Body of the Institution/Government of Rajasthan (as the case may be) be requested to dismiss the aforesaid employees for their dishonest behaviour, the Registrar reported that (a) Shri A.N. Saxena had filed a suit in the Court of the



Civil Judge Jhunjhunu against the University and the Governing Body of Seth Moti Lal College, Jhunjhunu, (b) the Court had passed interim orders on 17th May, 1971 to the effect that until the disposal of the suit the Governing Body was restrained from taking any action against the applicant in compliance of the impugned resolution of the Syndicate, and the University was restrained from putting any pressure on the Governing Body for implementation of the above referred resolution until disposal of the suit and (c) the suit was being defended by the University.

*Resolved that* the report be recorded.

52. With reference to its Resolution No. 30 dated the 14th May, 1971 confirming the orders of the Vice-Chancellor in entertaining, as a special case the applications of certain Government Colleges for fresh affiliation w.e.f. July, 1971, and appointing Inspection Committees in each case for making a local enquiry, the Syndicate considered the Inspection Reports in respect of (i) the application of Raj Rishi College, Alwar for fresh affiliation for M. Sc. in Physics and (ii) the application of S.D. Government College, Beawar for fresh affiliation for M. Sc. in Chemistry, with effect from July, 1971 (*Vide Appendices I & II respectively*)

*Resolved that* the conditions of affiliation in each case be communicated to the Director of Education, Rajasthan, Jaipur, and the Principal of the College concerned, adding that the question of granting provisional affiliation would be considered on receipt of a report in regard to the compliance of the conditions.

53. With reference to the Academic Council Resolution No. 24 dated the 19th Sept., 1967 duly approved by the Syndicate (vide its Res. No. 2 dated 23rd Oct, 1967) recording the information given by the Director of Medical & Health Services, Rajasthan Jaipur, to the effect that the State Government had decided to close down the Nursing College, Jaipur gradually i.e. as and when the students already admitted cleared out, and that according

to the decision the college had not admitted any fresh candidates to the First year of the four-year B.Sc. (Nursing) course in July, 1967, the *Registrar reported* receipt of letter No. 622/Plan/NC/71 dated the 22nd May, 1971 from the Director of Medical & Health Services, Rajasthan, Jaipur, informing the University that the continuance of the College of Nursing from 1971-72 onwards was under the consideration of the State Government and further developments of the case would be intimated by him in due course of time.

*Resolved that* (i) the report be recorded and (ii) the Vice-Chancellor be authorised to take necessary action in the matter on receipt of a further communication from the college authorities.

54. The Syndicate considered a letter dated the 11th June, 1971, read with a subsequent letter dated the 12th June, 1971, from the Secretary, Gyan Jyoti Shiksha Samiti, Sri-Karanpur, requesting that the application made by the Samiti in the year 1969 for fresh affiliation of proposed 'Gyan Jyoti Mahavidyalaya' at Sri-Karanpur for P.U. and T.D.C. Arts & Science classes be again considered for the session 1971-72 and the proposal be treated as being for P.U. and T.D.C. classes in the Faculties of Arts and Commerce (instead of Arts and Science).

In this connection it was reported to the Syndicate that :

- (1) On the application of the Samiti made in July, 1969 an Inspection Committee was appointed by the University, but before the Inspectors could proceed the Secretary of Samiti sent a communication to the University to the effect that the building had not been completed and, therefore, the application be treated for the session 1970-71. However, nothing was heard there-after from the Management till April, 1971, when the Board of Inspection had already met.

- (2) The Secretary was informed that it was too late to consider the matter and his attention was also invited to the fact that the application did not mention details about the financial position of the Management to start and maintain the proposed college. In reply the Secretary submitted a letter dated 11-6-1971 giving the sources of income. As against the estimated expenditure of Rs. 1,50,000/- the Management had shown an income of Rs. 1,78,000/- as per following details :—

	Rs.
(a) Resolution passed by the Municipality for aid every year.	15,000/-
(b) Resolution passed by Vyapar Mandal (10 paisa for every Rs. 100/- sale estimated at 3 crores.	30,000/-
(c) Resolution passed by Cotton Mills (Rs. 1/- for every cotton bale-sold).	30,000/-
(d) Resolution passed by Transport Companies (10 paisa per package average despath being 150000 to 2 lacs every year)	15,000/-
(e) Estimated produce from own land.	10,000/-
(f) Donations from Iala Munshi Ram Contractors (10% of the yearly profits).	10,000/-

(g) Donations from land-lord 40,000/-  
and Agriculturists.

(h) Income from fees, assuming 28,000/-  
that at least 60 students  
will be admitted to each  
of the P.U. (Arts & Com.)  
and First Year T. D. C.  
(Arts & Com.) classes.

Total	1,78,000/-
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- (3) The Secretary stated that a new building costing about Rs. 3 Lacs was ready for the college and necessary furniture had been provided in the same.

Resolved that (i) the application be entertained and (ii) the Vice-Chancellor be authorised to—(a) appoint an Inspection Committee for making a local enquiry and report and (b) take further necessary action in the matter in the light of the recommendations of the Inspectors.

55. The Registrar reported that : —

- (1) An application dated 20th Nov, 1970 from the Adarsh Vidya Samiti. Ajmer, for fresh affiliation of the proposed Adarsh Degree College at Ajmer for the Three-Year Degree course in Arts in various subjects (including the subject of Sindhi which has not so far been started anywhere in the University) w.e.f. July, 1971, was received in the University from the Director of Education, Rajasthan under cover of his letter dated 8th June, 1971 with the remarks that the Directorate had no objection in granting affiliation to the above college, but no grant in-aid would be paid to the institution by the

Govt. and the fulfilment of the University conditions of affiliation would be the sole responsibility of the institution.

- (2) A perusal of the application revealed that detailed information in regard to the financial position of the Management to start the college and maintain it in accordance with the requirements of the University had not been given.
- (3) Since the application was received at a late stage and complete information was lacking, a reply was sent under directions of the Vice-Chancellor on 14th June, 1971 that it was not possible for the University to entertain the proposal for the ensuing academic session 1971-72, adding that if the Management so desired it could make a fresh proposal for the session 1972-73 through the Director of Education well in time, and send along with the proposal complete information about the financial position of the proposed college including the endowment fund of Rs. 2 lacs, after assessing the expenditure that was likely to be incurred by the Management in running a degree college in accordance with the norms laid down by the University.

In this connection the Syndicate considered letter No. IV/33-III/775/71 dated the 15th June, 1971 from the secretary Adarsh Vidy Samiti, Ajmer (received in reply to the Registrar's letter dated the 14th June, 1971, cited above) reiterating their request for provisional affiliation w.e.f. July, 1971, and giving the *following* information :

- (1) The building for the college had reached the roof level and would be ready by the time the

collegee started functioning and it would be fitted with all shorts of modern amenities.

- (2) Hostel would not be necessary as the College would have only day scholars.
- (3) Qualified staff would be recruited as per University rules.
- (4) Endowment Fund of Rs. 2 lacs would be created as per Univerity rules.
- (5) The sources of income for running the college will be as follow :

(a) Fees from the students,

(b) Grant from the Government—

(In this connection it may be stated that the State Government has clearly stated that no-grant-in-aid would be given to the institution).

(c) Donations from public,

(d) Income from fetes and varity enter-tainvent programme.

(e) Benfits from property worth Rs. 3,00,000/- belonging to the Sindhi Seva Samiti.

- (6) The Samiti was running one Higher Secondary and two Secondary School at Ajmer, and the Government had since taken these institutions on its grant—in-aid list and, therefore, the Samiti would be saving about Rs.75,000/-which could be diverted towards the running of the proposed college. Last year's accounts submitted by the Samiti in respect of the Secondary Bchool and the Higher Secondary School revea-

led that the Management contributed a sum of Rs. 46, 120.38 towards the expenses of these institutions.

*Resolved that* (i) the application be entertained and (ii) the Vice-Chancellor be authorised to—(a) appoint an Inspection Committee for making local enquiry and report and (b) take further necessary action in the matter in the light of the recommendations of the Inspectors.

56. The Syndicate considered whether a part of the residential accommodation provided to an employee of the University could be permitted to be used for starting a small scale industry in the form of 'Faculty Premises.'

*Resolved that* such a use of the University accommodation be not permitted.

57. The Syndicate considered recommendation No. C (i) of the University Sports Board made at its meeting held on the 19th May, 1971, regarding Inter-Collegiate Tournaments to be conducted during the session 1971-72 (*Vide Appendix III*).

*Resolved that* the aforesaid recommendation of the Sports Board be accepted.

The meeting ended at 4.00 P.M. with a vote of thanks to the Chair.

Sd/—A.B. Lal,  
*Vice-Chancellor.*

Sd/—L.P. Vaish,  
*Offg. Registrar.*

## APPENDIX I

*(Ref:- Reso. No. 52 of the Minutes of Syndicate dated 17th Jun., 71)*

Extract from the report on the Inspection of the R. R. College, Alwar in connection with its application for fresh affiliation in M. Sc. (Physics).

16. Does the Committee recommended affiliation ?      There are so many post-graduate Colleges in Physids. This will be another poor addition to the list.

The Inspector has given his observations in the following note appended to the Inspection Report:-

I have always wondered why these inspections are organised. There exists nothing in the College which the Inspector has to inspect for M.Sc. (Physics) affiliation; no equipment, no library, no laboratory space, no lecture theatre and no staff. But as the Institution is a Government Institution, everything is promised. I understand verbally. Further, the details of the grants which the Government is supposed to provide are all written as a pre-condition under University Rules and the Department of Education holds promise for that.

1. My difficulty is this that the process of opening of a Post-graduate College although unjustified from the point of view of employment potential and promising young students is something which some other authority has to look into.

2. The Institution may be opened but the staff should be appointed first; a suitable grant is to be provided so that laboratory can be set up; books can be procured, and the teachers could be given an opportunity to prepare the topics which they will be teaching. All this can take easily a year, and then the boys could be admitted.

3. Most of such observations in earlier cases have all gone unheard of.

I, therefore, suggest that this scheme of inspection may be abolished. If there has to be an inspection let it be after a couple of year, so that one can find for himself whether the classes are running effectively. In the end I would like to



make one more observation. It is near impossible for the faculty to teach 8 papers with a strength of around 10 teachers. I am of opinion that there should be a minimum strength of 20 members of the staff to take up responsibility for post-graduate teaching.

The administration is perhaps not aware of the fact that present day M. Sc. Laboratory is more than 75% self assembled by academic people, and one cannot go in market to buy an apparatus to set an experiment. Our other affiliated Colleges are working in miserable conditions.

Sd/- B. L. Saraf

Prof. & Head of the Department  
of Physics, University of Rajasthan,  
Jaipur.

## APPENDIX II

(Ref : Res. No. 52 of the Minutes of the Syndicate dated 17th Jun, 1971.)

Extract from the report on the inspection of S. D. Government College, Beawar in connection with its application for fresh affiliation in Chemistry w. e. f. July, 1971.

## 16. Does the Committee

*recommends affiliation ?*

The College be asked to satisfy the affiliation requirements of the University and the situation may be reviewed after that. The conditions of affiliation prescribed by the University should be satisfied by the college before the affiliation is granted. A summary of the conditions is as follows:

*Non-Recurring grant :*

Rs. 80,000/- for a Unit of ten students  
Rs. 50,000/- for next ten students

*Recurring grant :*

Rs. 10,000/- for ten students  
Rs. 500/- per additional student

*Lab. space per student :*

20 Sq. ft.

*Lab. accommodation :*

One Laboratory for Previous year, one Laboratory for Final year ; one preparation room; one Balance room  
One Dark Room; one Store Room; One Combustion Room; one Glass Blower Room and one Research room.

## APPENDIX III

*(Ref. Res. No. 57 of the Minutes of Syndicate, Dated 17th June)*

Item No. C. 1. of the Minutes of the Meeting OF THE  
SPORTS Board held on 19th May, 1971.

(Resolved to recommend that venues and University  
grant for each Inter-Collegiate Tournament for the  
year 1971-72 be allocated as per Appendix 'C')

## APPENDIX 'C'

CHART FOR THE UNIVERSITY INTER-COLLEGIATE  
TOURNAMENT 1971-72

S.No.	Tournament	Venue	Grant
1.	Athletics (M)	Raj. Rishi College, Alwar.	1,200/-
2.	Basketball (M)	Govt. College, Ajmer	1,000/-
3.	Badminton (M)	Not yet decided	700/-
4.	Cricket	—do—	1,200/-
5.	Chess and Table Tennis	—do—	1,000/-
6.	Football	Govt. College, Sirohi	1,000/-
7.	Gymnastic, Wrestling Wt. Lifting and Best Physique	Not yet decided	1,500/-
8.	Hockey	Govt. College Kota	1,100/-
9.	Kabaddi and Kho-Kho	G.V. Col. of Agriculture Arts and Sc. Sangaria	1,200/-

10. Swimming	Univ. School, of Law Jaipur	600/-
11. Shooting (M&W)	Not yet decided	700/-
12. Tennis (M&W)	—do—	700/-
13. Women's Tournament	—do—	4,000/-
14. Volleyball	Seth Moti Lal. Col., Jhunjhunu	1,000/-
15. Squash Rackets	M.S.J. Col., Bharatpur	400/-

N.B. :—The venue's for games mentioned at serial No. 3,4,5, 7,11,12 and 13 shall be decided by the Chairman, Sports Board.

## INDEX

*Abbreviations used* :—V.C. for Vice-Chancellor; Syd for Syndicate ; F. C. for Finance Committee; S. B. for Board of Sports; E. C. for Equivalence Committee; R.B. for Research Board;P.B. for Publication Board;B.I. for Board of Inspection A.C. for Academic Council; Fac.for Faculty;B.O.S. for Board of Studies; C.O.C. for Committee of Courses;I.U.B.I.for Inter University Board of India; Com. for Committee; U.G.C. for University Grants Commission; P. for Page, p.p. for Pages; Exam. for Examination; Versity for University; T.D.C. for Three Year Degree Course; reg. for regarding, w.r.t. for with reference to; w.e.f. with effect from, Recoms. for Recommendations.

*Appointments* : — (i) Prof. P.L. Bhatnagar, Vice-Chancellor tendered his resignation (Page 1163).

*Important decisions*—( i ) Syndicate debarred (i) Shri K. K. Pathak, Jaipur and (ii) Shri A. N. Saxena, Jhunjhunu from remunerative work forever (Page 38).

(ii ) Syndicate approved the observation of the Academic Council for implementation of the revised rule of securing at least 60% marks at the Post graduate Previous exam. for offering Dissertation at the Final exam.w.e.f. July, 1972 (Page 769)

*Permission* :—( i ) Syndicate permitted the V. C. to  
*Sanction* attend the conference held at Legon (Ghana) (Page 44).

- (ii ) syndicate Sanctioned a sum of Rs. 2,000/— for Organising Summer School in Accountancy and Business statistics for a period of 15 days during May, 1971 (Page 779)
- (iii) Syndicate granted provisional affiliation to Dungar College, Bikaner for ectarting LL.M. classes (Page 778)
- (iv) Syndicate sanctioned adhoc relief fo the employees of the University w.e.f. 1.1.1971 (Page 1489)